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SOUTH OF YESTERDAY

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COLUMBUS CAME LATE
SILVER CITIES OF YUCATAN
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SOUTH OF YESTERDAY

Novels

GREEN GOLD OF YUCATAN
MEXICAN GALLOP (with Richard Carroll)



A Tairona gold idol, about 4½ inches high.
(*Museum of the American Indian, Heye Foundation, N. Y. C.*)

SOUTH OF YESTERDAY

BY GREGORY MASON, PH.D.



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BY
GREGORY MASON

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To
M. L. M. *and* D. G. M.

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PART ONE
THE MAYAS

ERRATA

- Opp. p. 45: caption for lower picture, read "four years" for "two years"
- Opp. p. 82: caption for aerial photograph, read "Tulum" for "Tuluum"
- Opp. p. 131: caption for lowest photograph should read "Bottom row: pot at left in shape of an animal. Form of piece in center is unusual, meaning problematical."
- P. 150, l. 23: read "sixteenth century" for "fifteenth century"
- P. 158, ll. 9-10: read "sixteenth-century Mayas" for "early Mayas"
- P. 171, l. 3: read "this part of the New World" for "the New World"
- P. 181, l. 29: after the word "thumb," a period and the words "They use"
- Opp. p. 187: read "Amutsch," as in text, for "Amutsh"
- P. 295, l. 25: read "stung" for "bitten"
- Opp. p. 330: read "José de la Cruz Dingula" for "José de lacruz Dinula"
- P. 338, l. 6: read "twenty-one" for "twenty-nine"
- Opp. p. 347: read "Kukulcan" for "Quetzalcoatl." The latter, of course, is the Toltec equivalent of the Maya sky god, Kukulcan.
- P. 380: between ll. 9 and 10, insert:
JULIAN, ANTONIO. "La Perla de la America, Provincia de Santa Marta. Reconocida." *Observada y Expuesta en Discursos Historicos*, Madrid, 1787.

Chapter One

THE AMERICAN MEDITERRANEAN

IT IS HARD TO TALK ABOUT AMERICA to Americans, because few of them care about their continents.

As soon as a man makes a fortune in South America or in Central America, he goes to Paris or Madrid. North American people, who, with peculiar arrogance, call themselves Americans and let it go at that, are always looking longingly over their shoulders at England or France or Germany or Italy. Between glances, they shiver with fear of Asia because they are not sure of America. The fear of Asia is ancient in the blood of Europe, and it remains, without reason, a part of the modern North American's psychology.

America is the richest continent in the world, if we regard the three Americas as one continent, separated in the Tertiary and reunited again in the Quaternary. It is the richest in natural resources, and it is the richest historically. If this is "America," then the Caribbean Sea is America's own sea—the Mediterranean of the New World. All the outstanding historical cultures * of America except one, the

* The anthropologist uses the word "culture" to mean the whole group of tools, arts, crafts, sciences, and institutions which characterize a given people.

Inca of the west coast of South America—grew up around the Caribbean, just as the outstanding cultures of the Old World grew up around the Mediterranean.

If you fold the western tip of Cuba up northward and pin it against Florida, the Gulf of Mexico and the Caribbean become one large ocean, marked off from the main Atlantic by the Greater and Lesser Antilles. The thin waist of the larger Caribbean is caused by the peninsula of Yucatan, which thrusts up northeastward toward Cuba.

Yucatan, Guatemala, part of Mexico, and Honduras include the territory where American culture reached its pinnacle, a richness of art and science which is not yet fully explored or appreciated. The Maya nation's efflorescence of painting, sculpture, mathematics, and astronomy blossomed sometime between the period of Christ and the coming of the Spaniards to America. Historically, the Mayas are closely connected with the Toltecs and Aztecs of Mexico. On the great plateau above the northwestern shore of America's greater Caribbean, the Toltecs built the largest pyramids that the world has ever seen. The Aztecs built their luxurious pagan empire on the same land.

It is on the Atlantic side of America's private sea that the pinnacles of culture are found. If we go southward from the Maya country we encounter, in succession, several moderately advanced cultures, culminating at Panama in the rich culture called Coclé, recently made known by the work of A. Hyatt Verrill, H. B. Roberts, S. K. Lothrop, and others. Beyond these areas, we step on the continent of South America, whose Atlantic coastline leads us eastward to the scene of the mysterious Taironas, remarkably skilled in goldwork, and never conquered by Spain. Their land was where the morning sun glints on the perennial snows of the Sierra Nevada de Santa Marta on the north-

east coast of Colombia. They have been put on the cultural map of early American civilizations within the past few years by the labors of F. C. Nicholas, H. F. Smith, K. T. Preuss, J. Alden Mason, and the author. This book, incidentally, is the first to describe the Taironas and their achievements, except for a few technical papers not intended for the general reader.

This group of great industrial and agricultural nations half encircled our salt-water sea with a compact body of the highest cultures in America. The physical characteristics of that sea continue to invite comparison with the Mediterranean: There are steady trade winds at certain seasons, there is very little tide, and there are island "bridges" which may have played an important part in the transmigration of ancient peoples.

The true American—the American Indian—almost certainly was an immigrant from Asia. That theory is the tenet of orthodox anthropologists. The American came here a long while ago, bringing with him a relatively backward culture. He lost no time in enriching it by his own ingenuity and the materials at hand. He became a very successful American, except in one respect. Mechanically, he was far behind the Old World. That is how it came about that when Spaniards, Portuguese, Englishmen, and other Old World immigrants arrived here with gunpowder and steel, the American Indian was finished. However, his achievements in mathematics, astronomy, and art cannot be overlooked. We cannot forget that he learned how to multiply and divide long before any people of the Old World. He was using the concept of zero and place value in numeration several centuries before Europeans.

Most Americans today are either white men or Negroes—descendants of Europeans or of Africans. The American

Indian and the Chinese are first cousins, racially. If you will put in a hat all that has been accomplished by Europeans and Africans, and put in another hat all that has been accomplished by Asiatics and American Indians, you will find that the red-yellow Mongoloid race is the most distinguished of them all.

It behooves us to know and understand more about the earlier America of the Mayas, Aztecs, Toltecs, Incas, and Taironas. They were our predecessors in this hemisphere; they lived here a long, long time before we did, and perhaps their experiences and accomplishments may point to some new conclusions about our America and how we can best live in it and develop it. We have not made much progress in thinking about our predecessors, and it is amazing how little of the pre-European culture we are aware of. We would be hard put to it, most of us, to know which of our own culture traits are indigenous to America, and which are importations.

Twentieth-century Americans are fond of music. Music is an Old World art. Weaving, pottery, and architecture are American arts, but America's greatest contribution to culture is in science—mathematics and astronomy. Insofar as we modern North Americans, who pompously call ourselves Americans, are great manufacturers and inventors, we are running true to the spirit of our continent. We seem to think that the "discovery" of America by Europeans indicates that Europeans were superior to Americans. It is certain that Europeans thought so, too. Actually, the "discovery" of America merely indicates that Europeans were not contented with their own continent. We remain culturally dependent upon Europe and chronically in dread of involvement in European wars only because we nourish a hemispheric inferiority complex. A study of American

prehistory would convince us that America has a culture more original than that of Europe, most of which was borrowed from Asia and Africa.

Most of American man's claims to antiquity have come through discoveries made in an area which may be termed "Southwestern." At Folsom, New Mexico, beautifully made boat-shaped jasper dart points, were found. They were shot into a now-extinct species of bison in a great communal hunt. According to Mr. Barnum Brown of the American Museum of Natural History, that hunt occurred from fifteen to twenty thousand years ago. In the same state, on Bishop's Cap Mountain, the bones of Folsom Man were dug up in association with the remains of the little ground sloth. Former Director Bryan of the Los Angeles Museum thinks that Folsom Man walked the earth perhaps as much as fifty thousand years ago. That is a very creditable age—even when weighed against that of Europe's Cro-Magnon Man. There is a gravel bed in Oklahoma where arrow heads were found which Geologist Harold Cook believes to have been resting there for perhaps three hundred thousand years. The discoveries of Dr. M. R. Harrington in Gypsum Cave, Nevada, and of other scientists at several other points in our own country, leave no doubt that man was in America in the Pleistocene Age—at least twenty thousand years ago.

There is no doubt that the high culture found here by white men in the sixteenth century was developed by American Indians without help from the so-called Old World. The cultural independence of America is demonstrated by the unique character of her languages and agriculture, neither of which has any evidence of Old World influence. Curiously enough, the conclusion of scientists that the first Americans were responsible for their own cul-

ture seems to be resented by the average citizen of the United States. Our pro-European, pro-Asiatic bias is so deep that the chief concern of any layman, once he has acquired a smattering of information about Mayas and Incas and Aztecs, is to decide to what particular part of the Old World he shall attribute institutions which germinated here. Our own institutions are even attributed to fictitious worlds—mythical Atlantis, imaginary Mu.

The Maya civilization is known to have been thriving through the Middle Ages, and as far back as one or two centuries after Christ. The Maya calendar has been shown by Dr. Herbert J. Spinden to have taken its beginnings from certain celestial events of the seventh century B.C. The Mayas inscribed their important records as dating from the day 4 Ahau 8 Cumhu 13 baktuns, 0 katuns, 0 tuns, 0 uinals, 0 kins. That would be October 14, 3373 B.C. by Spinden's correlation of Maya and Christian dates, or August 12, 3113 B.C. by Goodman's correlation. This date is generally considered to relate to some purely mythical event.

There is mystery in the sudden dissolution of the Mayas, as there is mystery in their origin. Epidemics of yellow fever, exhaustion of the soil, and civil war are possible causes of a sudden cessation of vitality which allowed the hungry jungle to creep in upon a glorious civilization. There are many mysteries concerning America's past which absorb the energies of men who have dedicated their lives to learning the story of mankind.

How did the Toltecs build the Cholula pyramid, which is three times bigger than that of Khufu, the largest in Egypt? How did Peruvian surgeons gain their amazing skill in trepanning skulls? How did Inca weavers learn to make finer

tapestries than those of the Gobelins? How did the Mayas learn to grow and manufacture cotton which the misnamed Old World never has equaled? How, without telescopes, did they learn enough about the heavens to make a calendar which is more accurate than ours of today? How did the engineers of the Incas build their great walls, dams, aqueducts, and irrigation systems? How did Central American contractors, without the aid of beasts of burden, build stone avenues that were broader and more permanently constructed than the famous roads of Rome? What was the secret of Aztec and Inca bronze? Why did socialism work better in Peru than it has ever worked anywhere else? Why did the Peruvians and the Mayas merge church and state, and why did the Aztecs decide that the two must be separated? Why did executive and legislative functions of government work so smoothly in ancient American countries that judges hardly were needed at all? Are the present Maya Indians, who speak the old Maya language, direct descendants of the temple builders?

Archaeology is more than a concern about the past for its own sake. The study of prehistory is a religious, scientific, artistic, *practical* pursuit. Primarily, it is concerned with answering the question: "Who am I, what am I, whence have I come?" We have organized religions because man wants to know where he came from and where he is going. Many persons think that we shall never know the answers. Nonetheless, it is a good plan to try to learn them.

Knowledge of the past throws light on the present and the future. This is what archaeology means to its finest exponents. Men like Kidder, Tozzer, MacCurdy, Vaillant, Fay-Cooper Cole, Petrie, Hodge, Kroeber, Spinden, Joyce, Breasted, Ledyard Smith, and others have so used it. (I am aware that I am prejudiced by the influence

which certain men have had on my thought-processes; aware that there are equally distinguished men whom I have not mentioned because bad fortune prevented my coming in contact with their minds.)

The important knowledge to be gained by modern Americans who study the Maya, the Aztec, the Toltec, the Inca, and the Tairona is in the fact that these people were geared to the continent and the climate which we black and white Americans have inherited. A study of pre-American history would give us, first of all, a pride in our culture—a thing which is just as important as our race. The Harlem Negro is a Negro second and an American first, because his culture is more important than his race. Senator Lodge of Massachusetts is an American first and a Nordic white second, because his culture is more important than his race. The same thing is illustrated a hundredfold by the Irish Catholics in America. They are successful Americans because they have adopted, enthusiastically, the culture of this continent. Our unsuccessful Americans are the groups which fail to cut off connection with the Old World and cling, morbidly, to the idea of "race" fostered in the curious, confused lands from which they have come.

Archibald MacLeish, librarian of Congress, said in his Columbus Day address in 1939 that no resident of the United States "can truly say that he knows the Americas unless he has knowledge of . . . this older American past which shares with ours the unforgettable experience of the journey toward the west and the westward hope."

Which were the best of our early American immigrants? Were they those who stayed in the uncomfortable climate of the far north, and thereby showed their vigor? Were they those who imagined something better and went on southward until they found the Caribbean Bowl? Perhaps

we have overdone our admiration for the Puritan—the man who makes the most of a bad situation. Perhaps we have underestimated the man who goes on until he finds a better situation—like the Mayas of Yucatan and Guatemala.

Along the coasts of the Caribbean, the climate is pretty much the same. Always hot, the only seasons are the dry season and the rainy season. Climatologists may say that, in the end, the first great Americans were undone by the ease of the climate they found. Where the land rises steeply, as it does on the oblique coast of the Taironas, the sailors at anchor in the harbors can see snow on the mountains all the year round. The mountains are only twenty-five miles inland, although they are nineteen thousand feet high. You get entirely separate crops there simply by going uphill. Up in the highlands of Mexico, in the Toltec country, you get only one crop a year instead of two. Your compensation is in an invigorating coolness at morning and at sunset.

To us modern Americans, these countries may seem to have too much heat. The inexorable fact which confronts the historian is this: All the greatest cultures of the world, prior to the time of Christ, grew up in the tropics or the subtropics. America's great cultures lie buried in the jungles and hidden in the inscrutable mountains which form the rim of the Caribbean Bowl.

Chapter Two

BULGES AGAINST THE HORIZON

THE CARAVELS OF FRANCISCO Hernández de Córdoba were twenty-one days out of Havana in February, 1517, before they sighted the coast of Yucatan near Contoy Island.

The University of Pennsylvania's big chartered airship, N.C. 8044, is two hours, forty-six minutes, and thirty seconds out of the airport of Havana on her quest of ruined cities of the ancient Maya empire. Land is visible ten miles off the port bow—an island with a lighthouse at its northern end. Contoy Island!

Contoy, Contoy, Contoy! A lovely name! Not so lovely as El Dorado, maybe, but lovely enough, and stronger.

I am Francisco Hernández de Córdoba, with a brown, pointed beard. I sweat too much, and the old dagger wound in my groin is a flicker of March wind, but I can digest anything and my arms and shoulders are catapults.

It is the morning of February 28, 1517. A murky day. Altitude twelve feet—the poop deck of a caravel. The gulls, jeering above the ship in their power of flight, veer to westward, where Contoy Island may be seen as a white streak against the dull blot of the mainland. Feathered mari-

ners, manning double canoes, are cameoed against that beach. Farther back the thatched houses of the snake worshippers lead toward stone temples at the near edge of fields of waving corn.

Contoy, Contoy, Contoy! I am Juan de Grijalva, who comes to Yucatan in 1518. Long and lean and sour, I drive my men for gold, gold, as that Andalusian slut has driven me these eighteen years. I am a torturer and a self-torturer. Eleven days from Havana I see the stone temple on that island south of Contoy, and I lust to break up its rites and to shatter its gods. It is the afternoon of May 17, 1518. The sea is a white, lashing fury. I came for gold, and the sand of Contoy mocks me. . . . Contoy, Contoy!

I am Hernando Cortes with a black beard. Not a despot, as they will paint me in later histories; not a driver like Grijalva, but a diplomat, a player-off of this against that. An artist, as a matter of fact; a lover of life, with a jade-green, translucent soul. Not much of the soldier in me at all, if the truth were known, but I have cold captains around me—men who would rather kill than love. No, I am an artist, and therefore a gambler. I will burn my boats behind me when we reach Vera Cruz and conquer a continent. The artist in me would like to stay at Contoy, but the gambler pushes me on. Adios, Contoy. . . .

I am William Dampier. I am Teach, Roberto Rodriguez, Torribio Mundial, Gonzales Chac, Molas, and a hundred other freebooters who careened their vessels on the sands of Yucatan to refit for raids on the commerce of England and Spain. The men of war of the foremost powers of Europe chased us futilely into the shoals behind Cancuen, Mujeres, Contoy, and the other islands of this coast. They were still chasing us in the days when the navy of the independent Republic of Texas was pledged, in re-

turn for so much hemp, to protect the independent Republic of Yucatan.

I am the archaeologists who have braved these reefs and shallows in the quest for buried beauty. I am Catherwood, and grand old Stephens, Holmes, Saville, Morley of the restless mind; Spinden, outstanding scholar of the United States in his field, despite a weak stomach; Gann, adventurer and ascetic; Duncan Strong; Sam Lothrop, who can drink a barrel of gin and copy a cornice accurately; George Vaillant, who can re-create the whole picture of the past by touching its broken pottery.

I am the lizards sunning in the sands as they have sunned since the coral built this island of Contoy, and these other islands, and this whole peninsular mainland.

I am the coral.

I am myself, whatever that is. Certainly it is the discoverers from Spain and the buccaneers from Spain and England, and the archaeologists from many lands and the lizards and the coral. And I have come here by a double-motored amphibian airplane in two hours and forty-six minutes and thirty seconds from Havana. I have come here via Cuba from Miami with five other men. Three of us sit hunched in this small cabin, piled with duffel bags of bedding, and with *machetes* * and water bags, in case we crash in the bush. Around and on top of these are strewn charts and cameras and binoculars and the pads of paper which we snatch up now and again to write furious, half-legible notes to each other or to the two pilots sitting forward outside our cabin. The black instrument board, with its glass dials over white metallic hands, shows altitude, propeller revolutions per minute, density of the atmosphere,

* Note to Reader: Foreign words and phrases in this book are italicized only when they first appear, or when they are defined, or for emphasis.

state of gas and oil tanks and what not. It shows everything of any interest to men in the air, which other men have been able to snatch from an inscrutable universe.

Ormsbee, the chief pilot, hunches his huge shoulders over the delicate control wheel, and his big jaw munches on gum. We all munch gum. A few months ago it was derived from sapote trees standing off there in the jungles of the mainland of Yucatan. It is good for the nerves to have something to do with the face, and smoking is not permitted. Idle faces, jumpy nerves; so we are bringing some of her chicle back to Yucatan in an airplane at a hundred miles an hour. It came out on the backs of mules at two miles an hour.

Carey, co-pilot and radio man, gets occasional messages from the outside world, and writes us little notes about football games in California or suicides in New York.

Archaeology is not a dry-as-dust cult. Archaeology is a living, breathing part of modern life. It can show people who are harassed by the breakdown of modern capitalistic civilization how to get back to the simpler, older, more beautiful way of life.

Go South, young man, go South!

Here, in these broad acres beneath us, a thousand or fifteen hundred years ago, people lived who were happy without any money except cocoa beans and red sea shells. Here in Yucatan—and in all the countries of America south of the Texas border—are broad stretches of land which once supported a big population. This land is deserted today. Perhaps exhaustion of the soil caused it to be abandoned, but now it can produce good yields again. It is land that may be had virtually for the asking. In most countries in Central and South America a homesteader may acquire a farm large enough to support a big family. In some in-

stances he may acquire it for a few cents an acre; in others, merely by developing it and paying nominal taxes. And this land produces at least two, often three, crops a year.

Contoy is off the port beam. We are over the mainland now. An hour ago, the white sails of Cuban fishing schooners were pasted against the deep blue of the unruffled sea beneath us. Ormsbee tilted his scribbling pad marked "Pilot's Message" against the wheel, and penciled a prediction to be passed back to us: "Reach coast about 11:10." And here we are at 11:11, crossing a line of low, scrubby trees above a beach, whose lower edge is traced in white Caribbean foam.

We pass swamps and are over a dry plain, covered with trees, which a city man would call jungle. What would the Spanish explorers have seen if they had been flying in our Sikorsky five hundred years ago? I am Hernando Cortes with a black beard. The artist in me quickens to the spreading richness of the land I have come to conquer.

Flying inland from the foaming reefs which parallel the east coast of Yucatan, I see clusters of white buildings, surrounded by smaller brown buildings. The brown buildings greatly outnumber the white ones, for they are the homes of the average citizen of the Maya nation. Some of the white buildings are huge limestone palaces, where monarchs direct the intricate ritual determining every detail of the lives of perhaps the most religious people that ever lived. Near the palaces are the pyramidal temples, topped with the sort of towers which, today, we call "set-back" skyscrapers. In the temples are priests, elaborate in feathers and jade, making astronomical calculations for the guidance of farmers and navigators. Many of the computations of these first American scientists have been preserved in stone, and

they are so advanced that the science of their contemporary European savants seems primitive.

Back of the cities, the Spanish explorers would have seen impressive white causeways of cut stone wending westward and southward. They were the great raised sacbes for religious processions. Their blocks of white limestone had been laid solely by the man power of slaves, for the Mayas used neither beasts of burden nor wheeled vehicles. Along them there traveled endless columns of gorgeously decked religious pilgrims, side-by-side with the sweating porters of commerce whom the gods were aiding. Both pilgrims and porters were on the same mission: church, state, and commerce for the common profit were one to the Mayas.

A number of these great, stone roads are known to radiate out of Coba, and we are hoping to trace them from the air. Colonel Lindbergh failed to do so when he flew over Yucatan, because he was handicapped by a cloudy day. He and Dr. Kidder, who flew with him, told us that they believed the shadows thrown by trees growing on the raised roadways would be visible to an airplane in the early morning or late afternoon of a clear day.

In the *bajos* and swamps we crossed a few minutes ago, thousands of marsh birds were startled into flight by the thundering motors of our plane. Across a tiny piece of savannah, we saw three wild deer scampering to safety. These are the heirs to what was once the center of the world's most highly organized scene of agriculture and commerce.

If the Spanish conquerors had been flying, as we are, they would have seen, outside the city walls, land devoted to pasturage for turkeys, the only domestic animal of the Mayas. Verging on the pasture land was the land planted with basic crops. There were fields of beans and squash and melons. Beyond these truck gardens were the light green

patches of cornfields. Maize was the stock food of the American Indian from what is now Canada to what is now the Argentine. Manioc, the vegetable from which we get tapioca, gave the Indians cassava bread, a staple with them second only to corn. That grew in dark-green mats (to the airman's eye) wherever the ground was swampy. Further inland, the cornfields alternated with spotty, open fields of medium-green leaves and white blossoms. Cotton! The vegetable which later became the stock crop of all the southern part of the United States of America. The Mayas had the best cotton in the world, in their time or since. It was so fine that the Spaniards mistook fabrics woven of it for silk. When they found that Yucatan had no gold mines, they exacted tribute from the Mayas in cotton.

Every mile or so a round, open pool from fifty feet to three hundred feet in diameter winks upward like a huge, slimy, green eye. They wink upward at us, at 11:55 A.M., as we circle over some lakes not shown on the maps. There are six lakes in all, not counting the small, natural pools in the limestone, which are called cenotes. Yucatan was once a coral reef, and its limestone forms into many cracks and fissures. The subterranean rivers and lakes beneath the reef break out, here and there, into the many cenotes.

Half an hour later we are flying directly over a village of thatched huts on the coast. It is Playa Carmen, where, in 1926, I landed from a schooner to measure some ruined buildings. This gives us an exact check on the group of six lakes we have just discovered. In about twenty minutes we have flown the equivalent of a distance it took me three days to cover on a mule, in 1928. The scalloped coastline stretches away to the north and south, margined by gray limestone on the promontories and coral sand on the bays. Paralleling it offshore, the sea breaks in a thin ribbon of

white on the barrier reef. The northwest point of Cozumel Island is about ten miles away. The airport of the Pan American Airways is just beyond.

The brief flight of the morning showed us why archaeologists and explorers, who have been hunting the solution of the Maya riddle for a century, have made so little progress. We have gained an idea of the extent of the ruin the jungle has piled upon the glory that was Maya. To the airman, flying over this bush country, the task of the ground explorer seems as hopeless as a search for a submarine in the Atlantic. The twentieth-century Department of Agriculture of the United States assures us that no acre of forest in Central America is virginal. The original forest was all cut down, somewhere between the time of Julius Caesar and the time of William the Conqueror, to make way for the Mayas' vast agriculture. None of the land was wasted. The slightly dryer and higher plain of the interior of the peninsula was given over largely to the crop which we call henequen or sisal. It produced rope for the ancient Mayas as, today, it produces binder twine for the American farmers to bind up their crops. The Mayas made their hammocks from it. They also made mats, durable cloth, rope rigging for their great sailing canoes, and a variety of other things—including their most intoxicating beverage, the equivalent of the Mexican *pulque*. The henequen, now and then, like the corn behind it, was broken by orchards of fruit trees—native American fruits like guavas and guanábana. There were tall, straight trees which gave the Mayas the hardwood they occasionally used over the lintels of their doors and their stone buildings. The same trees gave them sap for chewing gum, and this chicle is the base of our chewing gum today.

We fly toward Cozumel, the sacred island of the ancient

Mayas, and the focal point of those white ceremonial roads, now tree-covered. In a few minutes the ship hits the lagoon at Cozumel and bounces along between two great, curling bow waves, until it subsides into a more even position and taxies up to the landing beach. Mexican laborers rush knee-deep into the water. Some of them bend a hawser onto the ship's bow, while others adjust a gangplank against our forward deck. We walk ashore, to be greeted by a torrent of hospitable Spanish from General Trevino, commanding the Mexican troops on Cozumel. He is accompanied by my old friend, Señor Caldwell, who runs the chief store in San Miguel, and who is the rich man and first citizen of the sleepy, friendly island.

In the old days of the Mayas business and religion journeyed, hand in hand, to the shrine of Cozumel Island—as sacred to the first Americans as the Delphi shrine was to the Greeks. Cozumel retains this feeling of sanctuary, although today the island is known to the Mexicans chiefly as a point at which shipments of chicle from the mainland are transhipped on freight steamers for the United States. In the heyday of the Maya cities of northern Yucatan—Coba, Muyil, Chichen Itza, Mayapan, and Uxmal—Cozumel already was an important trading and shipping center, because it was the center for worship. All the island which was not temple was once vegetable garden. The Maya trading canoes put in there for water and for fruit and for maize, but they put in there also to receive the blessing of the priests who served the gods of the sea. That was an essential precaution to all prudent mariners who hoped to steer their dugouts, driven by fifty or a hundred brawny arms, from Yucatan to what is now Panama or Colombia.

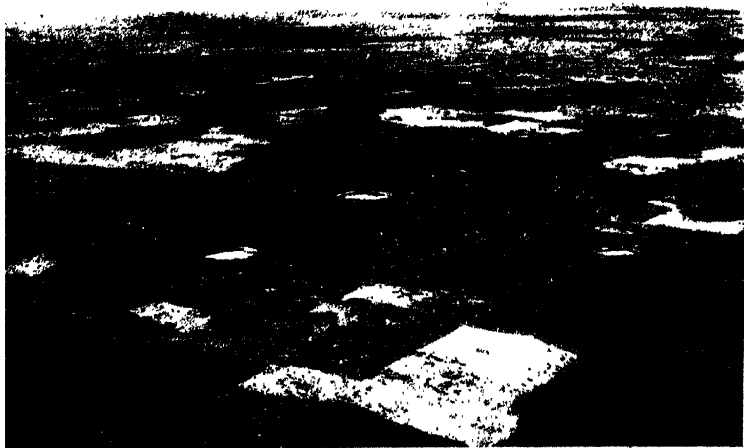
Today, the priests of the Turtle God are gone, and their temples are crumbling. But the spirit of religion still per-



(Fairchild Aerial Surveys Inc.)

(top) Members of the University of Pennsylvania's Central American Aerial Expedition. *Left to right:* R. A. Smith, photographer; Gregory Mason, field leader; Frank Ormsbee, pilot; Percy C. Madeira, Jr., director; J. Alden Mason, archaeologist; William Carey, copilot and radio operator.

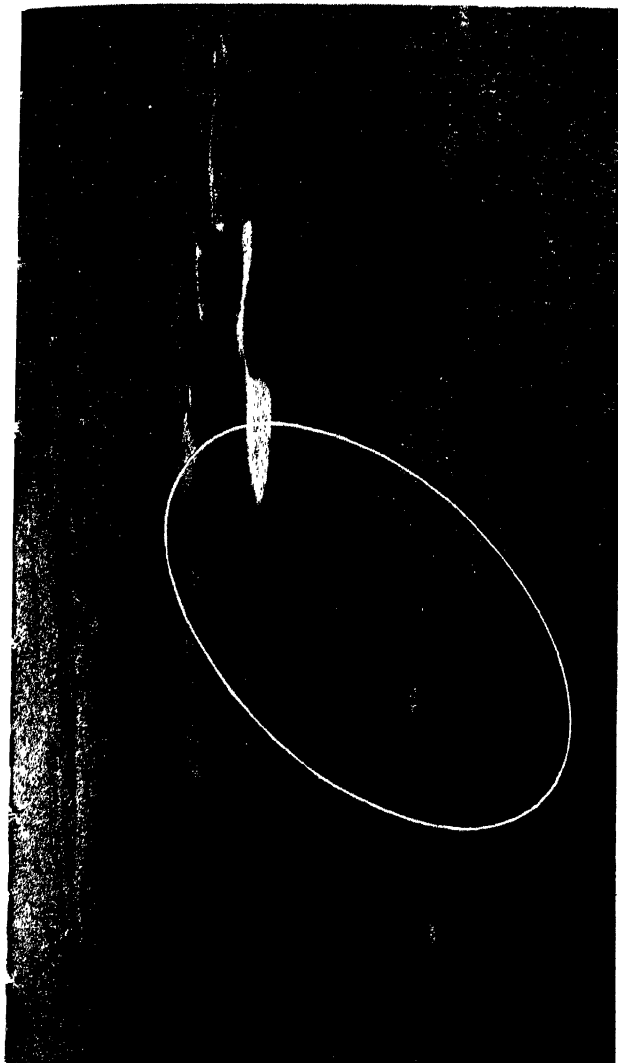
(bottom) The east coast of Yucatan.



(Fairchild Aerial Surveys Inc.)

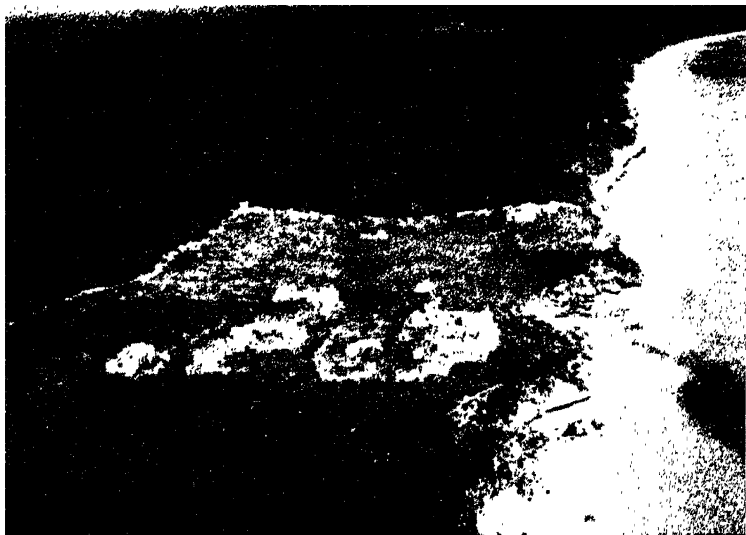
(top) The round pools are called *cenotes*, and supplied the ancient Mayas with drinking water. The light-colored patches are *milpas*, or Indian cornfields.

(bottom) Ruined city of Coba. Dark cone in center is a pyramidal temple. Dark long blot to right of it is a "palace." Only by risky low flying over the jungle are such ruins found. These lakes were too small for our amphibian to rise from.



(Fairchild Aerial Surveys Inc.)

The cross pattern in these trees in foreground is made by two raised roads of the old Mayas, running south from ruins of Coba, which are mainly on farther (north) side of lakes in background.



(Fairchild Aerial Surveys Inc.)

(top) Ruins of Tulum. Note the enclosing stone wall for protection.

(bottom) The ceremonial center of Chichen Itza from the air. At upper right: Temple of the Warriors; upper center: El Castillo; upper left: ball court; middle left: nunnery.

vades the island. At least, it seems the spirit of religion to us—a satisfactory religion, one devoted to restful contemplation rather than to human sacrifice and invocation of the gods of battle. It is a feeling of calm otherworldliness, aloofness, uniqueness. The feeling is quite in keeping with the fact—established by Ludlow Griscom, the ornithologist of my 1926 expedition—that Cozumel contains eighteen species of birds unknown elsewhere in the world. It would seem in keeping if a chemist found that the very air and rain of Cozumel are different, more rarefied, than the air and rain of the mainland dimly visible twelve miles away.

Next morning, we are over a smooth blue sea, swiftly leaving Cozumel behind us. At home it is cold. Perhaps snow is falling, or that miserable cold rain of New York Decembers, which rots the courage and drives men and women into saloons to rot their stomachs. But here it is summer, and easy to be brave.

Keeping the coast in sight for a while, we circle and zig-zag, looking for ruins. We pass the sites of several ancient towns discovered by two expeditions which, thanks to cash advanced by newspapers for my dispatches, I had the luck to organize. The press has learned that the story of man's past on this earth is of increasing interest to the public. And now *The New York Times* has helped to pay for the gasoline these huge, roaring motors are drinking.

Far south of us the great, stone *castillo* of Tulum stands out. That "high, white tower of stone" amazed the invading Spaniards when they viewed it from the sea in 1518. Brown patches are visible a few miles inland from it. They are seven or eight thatched huts, housing the dwindling remnant of the descendants of the men who painted the intricate murals in Tulum's famous Temple of the Frescoes.

South from Tulum, we pick up the two lakes of Muyil

and circle over the ruins which Spinden and I named Muyil when we found this old trading city four years ago. I know that Muyil has twelve buildings in a fair state of preservation, besides innumerable mounds where shrines and temples have fallen into the last stages of decay. We can see only one from the air—that high lookout tower which Spinden and Frank Whiting and I cleared of brush. This makes me realize poignantly how difficult it is going to be to “spot” buildings in other and unknown sites which have not been cleared of trees since they were abandoned centuries ago.

Flying northward, but keeping inland now, we pick up Coba. That is a big city in northern Quintana Roo, already visited by several explorers on foot and by Lindbergh in the air, but never definitely located. We are learning the technique of archaeological exploration from an airplane. We measure two of the largest of Coba’s four lakes by flying over them and timing those flights against our estimated speed. This is the first time in history that an airplane has been used to measure the length of lakes. The causeways, or raised roads of stone which radiate out of Coba, are found by flying high and picking up the line of shadow which the higher trees, along each causeway, throw over the quiet green jungle. In order to find ruined buildings you must get the bulge of their profiles against the horizon, and to do this you must fly low. A long, low bulge means a building of the “palace” or of the “monastery” type at Coba. A sharp, conical bulge means a pyramidal, “set-back” temple.

It is very risky to fly low. We dare not think what might happen if the racket roaring off the treetops were to cease. So we fly high for five minutes and swoop low for one, while wild animals and tropical birds flee before our thun-

dering motors. We keep very busy, watching compasses and altimeters, and scanning the limitless horizon of tangled green and gray for the conical excrescences which may show where another Nineveh or Tyre of the ancient west has succumbed to voracious vegetation.

We definitely locate Coba. Coba is at latitude 20 degrees, 30 minutes north, longitude 87 degrees, 42 minutes west—just about ten miles south of where it previously has been reported.

We trace, flying high for nearly twenty miles, the shadow of the great causeway believed to run from Coba to Yaxuna, sixty-five miles westward. By so doing we add much credibility to the theory that the two cities are probably connected. That has been the allegation of ground archaeologists who have found a road running out of each of the two towns in the direction of the other. When we lose the shadow, we swoop down until our ears ache again with the echo of the engines off the treetops, and we sight more bulges in the northwest. Then we change course and fly high until we think we are over them, swoop low, and there! . . . There we find—a “new group of ruins”! At latitude 20 degrees, 42 minutes north, longitude 88 degrees, 6 minutes west. The trees won’t let us land, but we may go there on foot some day.

Late in the afternoon we hit the ground at Merida, capital of the state of Yucatan. It is built on the site of the old Maya city of Tihoo, where in 1540 two hundred Spaniards defeated an army of Indians alleged by the boastful Europeans to number as many as forty thousand. And where, in 1924, an army of *gringos*, looking for easy divorces, introduced modern plumbing! With the plumbing, Ford taxis have come to supplant the picturesque old horse cabs in Merida.

Of all the memories of this unusual day, this sad reflection has lodged deepest in our minds: the majestic cities of one of the noblest and proudest peoples of all antiquity are, today, just little bulges on a horizon of unbroken jungle.

Chapter Three

JUNGLE SKIES OF YUCATAN

A LITTLE MEXICAN FORESTER buttonholes us in Merida. "There's a big ruined city over on the other side of Lake Chichancanab, near the west shore of the lake," he tells us.

No such city is shown on the Blom-Ricketson-Spinden archaeological map. If there are ruins there, they are "new"—just what we are looking for. Many an archaeologist follows a lead like this only to have it prove false, but the little forester sounds convincing. We take off again.

Merida slips away behind, a toy town with its rectangular streets and with the great twin towers of the cathedral pointing upward like two silver pins. The smell of Yucatan is lost, but it never is forgotten, once it has been smelled. The odor of flowers is in it, but what distinguishes it from the scent of other tropical countries is an underlying odor of the dry, barren soil of Yucatan permeated with the good, virile smell of oxide of iron splashed on the roads in ribbons of red. Early in the afternoon, turning to the right, we sight a large ruin. It is the House of the Governor at Uxmal, three hundred and thirty feet long, the longest Maya building yet discovered.

Uxmal, like almost every other site on the maps of Central America, is out of place. It is only one mile out of place—north of where the maps show it. There are other landmarks that are from ten to fifty miles out of place on the maps. These maps have been based largely on the guesses of *chicleros* and other unscientific observers and should be checked carefully by trained engineers, to the profit of the chewing gum industry as well as to that of archaeology.

We circle Uxmal for several minutes, with Smith at the after hatch as busy as a director in a Hollywood studio. He takes his pictures with the camera aimed aft, or at least off the stern quarter of the ship. In order that his view may not be obstructed by any struts, stays, or other accessories of aviation, he has the ship bank and roll into proper position.

The contrast between the point of view of the three men of the air and the three men of the bush never fails to interest me. The flyers give little consideration to the possibility that the airplane may fail us, but they visualize our plight as virtually hopeless if she does. The archaeologists are much less confident of the capacity of the ship to keep them over and out of the bush; much more confident of their ability to get out of the jungle alive if they should be dumped into it without broken bones.

"We can land on the treetops in a pinch and climb down a limb," say Ormsbee and Carey and Smith. "But where do we go from there?"

"Probably you'd break our necks in landing," think Madeira and Mason and Mason, "but if you put us on the ground, we'll get you out of the bush, or show you how to keep alive there indefinitely."

Nevertheless, the sight of the instrument board, with its black and white symbols of mechanical magic, is comforting. It is reassuring to know that the twin motors are still

kicking up seventeen hundred revolutions per minute. They make the threat of the trees seem remote.

It is a slightly hazy afternoon. From our altitude of a thousand feet we can see perhaps twenty miles. Having just passed Uxmal, we are approximately over what was the center of ancient American civilization. This central zone was bounded on the north by the Pueblo Indians of what is now New Mexico and Arizona; on the south by the people of the Incas, the Chibchas, and other cultured tribes of northwestern and northern South America. It pleases me to pretend that we can see all the way to those countries.

We pass over several small groups of ruins. Then we soar over the cities of Kabah and Labna in an area which, around the year 1000 A.D., had about as many inhabitants as the region of Miami and Palm Beach has today.

A few *milpas* (cornfields) come into view off at the right, in what is rather low, open, light-green country. Where modern cultivation is practiced at all, Indian cornfields like these always are a hint of possibilities to the archaeologist. Indians often cultivate the ground close to ruins, knowing that the ancients built only on fertile soil. But we see no *milpas*, no modern towns, nor even any huts to show where the owners of the *milpas* hide in the bush. We must be over Quintana Roo now, a little east of where that territory joins Yucatan on the north and Campeche on the west. We are virtually in *terra incognita* from the archaeological point of view, and are entering what really is unknown land from the point of view of any white man.

Before we left Merida, Ormsbee estimated that the lake and ruins described by the Mexican forester lie some thirty-seven minutes, flying time, from Uxmal. We left Uxmal forty-seven minutes ago. Where on earth is Lake Chichancanab? We have seen nothing resembling a lake.

An uneasy exchange of scribbled speculation begins in the cabin. After what seems a long time, P. C. M., Jr., queries Ormsbee—"Captain, are you sure we haven't gone much further south and west than the place where Chichancanab is marked on the map?"

At this juncture Alden Mason picks a small note off the floor. No one knows how many minutes it has been swirling around there in the draft from the forward windows. It is not signed, but is in Ormsbee's handwriting, now familiar to all of us. It says: "Lake should be here."

We look at one another, shrugging our shoulders and throwing our palms upward. Smith breaks into his infectious grin. No one seems to know how or when that note from Ormsbee got into the cabin.

We are really over the unexplored bush now, and unless we find a lake there is no landing place. Suppose the engines fail now? Frankly, I am slightly scared. We flew over just as bad country in northern Quintana Roo, but I have traveled through that bush afoot and on mule-back, so there always seems something friendly about Quintana Roo. None of us knows this territory. We are an hour and a quarter or more from the landing field at Merida, and heaven knows how far from our destination at Carmen, away over to westward on the Gulf of Mexico. To reach either one of these divergent points we must now cross nearly the entire Peninsula of Yucatan.

Moreover, there is a maddening and worrying uncertainty about the ship's fuel consumption. We left Miami secure in the belief that with fuel tanks full we had a cruising radius of four hours. But the flights from Miami to Havana and again from Havana to San Julian, Cuba, seemed to indicate that for some unknown reason the N.C. 8044's motors were burning gas at a clip which would leave us with

only three hours' cruising radius, even with our tanks full to their 250-gallon capacity. The flying from San Julian to Cozumel, and again from Cozumel to Merida, indicated that the ship was back at her normal lower consumption. Ormsbee thinks there must have been some "joker" in those readings at Havana and San Julian: either the tanks were not filled when we took off, or there was more fuel left in the tanks when we arrived than the mechanics at the Havana and San Julian fields told us. There is enough uncertainty about it all to make us anxious. The scribbling of notes begins again:

G. M. to R. A. S.—"Have we four hours' gas?"

Smitty smiles that engaging smile of his, and follows it with a "Who knows?" grimace.

3:25—Altitude 1000 feet. Those "lakes" ahead prove to be dried up.

3:27—We are climbing again to get more visibility.

3:28—I see a long lake on the starboard bow.

I tug Carey's sleeve. He has been busy with the radio for the last two or three minutes and hasn't seen the lake. He nudges Ormsbee, whose attention has been on something to port.

3:30—We are now descending and swinging to starboard toward that long crescent-shaped lake. Alden Mason sees it too, but Madeira and Smith, in the port seats, cannot see it and are plainly wondering why we have changed course.

3:31—We begin to swing to port. They think they see another lake over on that side, eastward.

3:41—We are flying only fifty feet over that eastern lake. It is narrow and winding—a lovely piece of water about two miles long and a third of a mile wide. No sign

of life—not even a wading bird. The southeast shore is low and swampy, the northeast dry and wooded. At first, we thought it might be Lake Payegua, upon which Lindbergh landed, but that had an island in it. There is no island in this—not even a protruding rock.

Reaching the eastern end of the lake we rise and begin to fly about southeast.

3:46—We can now see another lake some ten miles to the eastward. We are up thirteen hundred feet.

3:52—The gleams of a group of big lakes mark the southern horizon.

R. A. S. to G. M.—“Isn’t that the sea off to the east?”

Smith is pointing through the after port window to a distant, far distant, shine, which is not sky, not cloud. There are two streaks of shine, one just this side of the other.

G. M. to R. A. S.—“Looks like Lake Bacalar and the sea beyond it.”

R. A. S. to G. M.—“I know we have come way beyond Chichancanab.”

P. C. M., Jr., to G. M.—“I asked him if he wanted to go out to Campeche or Champoton and he said no—all right for Carmen.”

G. M. to P. C. M., Jr.—“Why doesn’t he head there then?”

As if in answer, the Captain swings her until her nose is on bearing 245 degrees. If Smith and I are right in our surmise, we are not much more than twenty miles from Lake Bacalar, almost on the border of British Honduras. That means that we have nearly crossed the Peninsula of Yucatan this afternoon from north to south, as we came from Merida, only twenty miles inland from the Gulf of

Mexico. That would mean that Belize is a much nearer airport for us to reach tonight than Carmen, our planned destination, due west back across the peninsula.

4:12—Our course now seems to be about 225 degrees (southwest).

R. A. S. to G. M.—“Cloud in south shaped like airplane.”

4:17—The skipper has just written to Madeira that he is going to give up looking for Lake Silbituk—a large landmark in Campeche which we thought we’d try to pick up—and head a little further north “to save time.”

We all know that he means to save time, *and* gas. A course northward of the supposed position of Silbituk should bring us to the coast of the Gulf of Mexico considerably east of Carmen. Ormsbee’s idea, of course, is that if our gas should give out he would prefer to be within gliding distance of water.

Carey is rocking slowly back and forth in his seat, pushing his right arm into the cockpit before him, and pulling it up again. He looks like a man rowing with one oar. He is pumping up pressure to send the lowering supply of gas to the motors.

4:19—Way off to the southwest there is a little clearing, as if made by an Indian. The first in a long time. We should have passed close to it if we had not changed our course just now. I must say I see it dwindling into the distance rather regretfully. The bush is very high now—real “big bush,” as the chicleros call it. The country is growing more hilly, and looks entirely inaccessible. The hills seem to be a continuation of that range which we followed southward from Uxmal.

Everyone is a tiny bit apprehensive. You can’t prove it, but you can sense it.

R. A. S. to G. M.—“Some pretty lightning effects in clouds on west horizon.”

P. C. M., Jr., to J. A. M.—“Any good liquor in Carmen?”

J. A. M. to P. C. M., Jr. (who passes the note around)—
“My friend Shoemaker has some good *Habanera*.”

4:25-30—A milpa five miles to north. What lonely Indian lives there? A muddy bajo to port of us. A ridge to starboard has white spots with the appearance of ruins, but too white. Uncleared ruins are gray. Only the care of the archaeologist restores the original white seen by the tourist at Chichen Itza and Uxmal. These spots probably are jutting peaks of bare limestone, or lightning-struck trees.

4:30—Madeira writes—“We ought to see sea soon.”

Smith to all and sundry—“I see it, fifty miles away.”

He has just poked his head out of the hatch, causing some of our loose notes to blow out after him. Closing the hatch, he points off to the northwest through my window.

I do not see any sea. Just bush. And bush.

J. A. M. has asked Carey, who has been talking with Carmen, to ask Mr. Shoemaker or Mr. Leslie Moore to come to the airport to meet him. The radio answer comes back immediately:

“Mr. Shoemaker is now waiting for you at the flying field.”

Grotesque, I call it. If those two streaks of white which Smith and I saw were Lake Bacalar and Chetumal Bay, we are now somewhere above the unexplored wilderness of the center of the base of the Yucatan Peninsula. Even though we are coming ninety nautical miles an hour, Mr. Shoemaker will have to wait a while. The N.C. 8044 is still on the course which should put her over salt water some distance east of Carmen, which means, ultimately, an angle off to that port—necessitating more mileage—if the gasoline

holds out. However, that is a good policy. Once we hit the big Laguna de Terminos, which parallels the coast behind a sandbar some sixty miles east of the town of Carmen, we can at least anchor for the night in comparatively calm water. Our radio works independently of our motors, so we should be able to tell Carmen where we are, if anchored, and have a motorboat bring us gas.

It is bizarre, too, to think that back in Miami Dunton, Pan American Airways manager, is tracing our every move on a chart. In case of serious trouble he will send another plane out after us. Dunton must be wondering what we are doing out over the heart of the jungle at this late hour of the day. Too bad those Mexicans delayed us at Merida by informing us, on our arrival last night, that Mexico City had revoked our permit to photograph. By a plentiful use of radio and the diplomacy of our kind friends in the Government, we got word this morning that the permit was restored and the seals on our cameras could be broken, but the delay prevented our leaving Merida this morning.

Ormsbee keeps balancing the chart on the edge of the wheel, which he can't throw over to Carey any more, for Carey is pumping pretty constantly now. They are a good pair of guys to tie to, Ormsbee and Carey. If the gasoline does not give out before we reach salt water, they'll get us down safely if anybody can. The sight of a nice big lake would be encouraging. But for many miles we've seen no water except small cenotes, staring up at us with their unhealthy green eyes. They are too small even for the ship to "pancake" into. The treetops would be better.

It is obvious that Smith was mistaken about sighting the sea. He scribbles a fast note to Ormsbee, which I read over his shoulder just before he sends it up to the pilot, via Madeira:

"Strong smell gas back here."

A leak would not be at all good with the gasoline already low. Moreover, gasoline leaks are what cause fires in airplanes. Watching Ormsbee closely, I push another stick of gum into my dry mouth. The big pilot balances his pad on the steering wheel and scrawls:

"That is from forward tank."

He doesn't seem particularly worried about it. Perhaps that is a pose to reassure us.

The sun is very low now.

Smitty writes me a note: "Never worry till motors stop. Then worry double."

The racket in the plane is reduced by half. The starboard motor has stopped. Weird, damned weird, how that happened just as I read Smitty's note! Ormsbee looks back at us and jerks his thumb ironically at the refractory motor. Then he and Carey lean forward and slide back the transparent hatch over their heads to have the clearest possible view of the silent motor.

In preparing for our flying expedition, we made a ten-mile test flight from Cozumel to the mainland on one motor and lost only thirty feet of altitude. But that was virtually at sea level. We are forty-one hundred feet up now, and we don't know just how high those greedy treetops are above sea level. One thing is certain: we'll lose a lot more altitude here than thirty feet in ten miles. And how far away is salt water? Or a lake big enough to land on? Carey hasn't been able to get Carmen since the message half an hour ago that Alden Mason's friend, Shoemaker, was waiting at the field.

Sput . . . sput . . . crack, crack, crack, brrrrr. The old starboard motor is singing again. Ormsbee looks over his

right shoulder at us, jerks his thumb at the motor again. Smitty merely grins, as usual.

4:58—Five miles on the starboard beam is a lake big enough for us to land on. It has a village on its northeast bank. We are nearly up to a big lake to port which we sighted ten minutes ago. It looks very shallow. The southwestern end of the lake to starboard is half dried up. How much farther away is Laguna de Terminos? The name literally means "Lake of Boundaries" but is grimly suggestive of "Lake of Endings."

If we do have to spend the night on the lake it won't be fun digging around in the dark after blankets and what not. It seems absurd that we have no food on board, except what the pilot calls "emergency rations"—mostly chocolate and some half-dried biscuit—which the Pan American Airways has all its ships carry in case of forced landings in out-of-the-way places. I bought ten dollars' worth of groceries in Miami, but we were forced to leave them behind because of the strict limitations on weight. They allowed us only eight hundred and thirty-five pounds for the four of us in the after cabin and our baggage. I weigh two hundred, and Madeira and Smith a hundred and sixty-five each. When James Eaton, manager of Pan American Airways in New York, met us before our departure, he looked us over and drawled:

"Do you have to select men like that?"

Our baggage was reduced again and again before we left New York, and again at Miami. We dispensed with a canvas-top, waterproof type of *mosquitero* in favor of a gauze type, because of this weight limitation. We limited ourselves to one blanket apiece, although at this time of year one should have two, or even three, in this country. We left our shotgun and most of our "gamegetter" ammu-

inition at Miami, and limited ourselves to only a thousand feet of moving picture film. And, to me most painful sacrifice of all, during the fortnight before we embarked on this aerial voyage, I took off thirteen pounds.

5:05—At last the Carmen radio operator is heard from again. He sends word that Leslie Moore is waiting for us on the flying field.

5:10—Smitty, coming down from aloft again, says he can see the lagoon about thirty miles away. I am afraid to believe him. From the cabin we certainly cannot see it. But Ormsbee waves his hand at us and makes motions intended to imply that we are approaching food and drink. We are descending. He must surely see the lagoon at last. The country below looks very swampy.

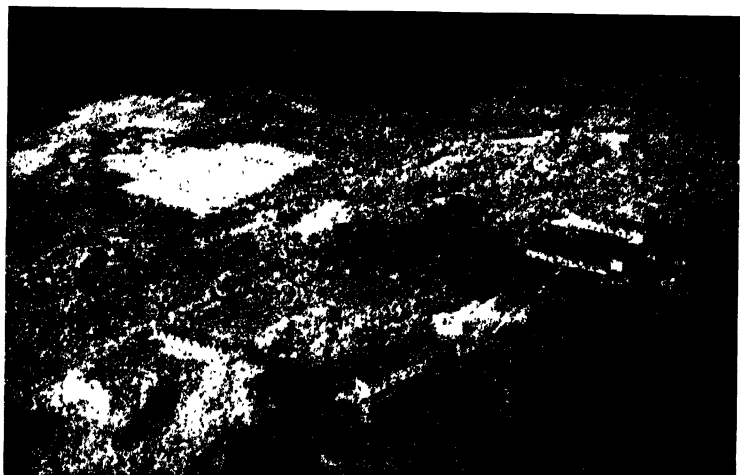
5:12—We are crossing a trail which runs at right angles to our course. There is a good-sized village ten miles to the north. The Captain points to the west where the sun is "drawing water" and writes us the message: "Pretty!" We are descending at a hundred and forty miles an hour.

5:14—Altitude 3325 feet. Carey is pumping, pumping up pressure.

"Rose-crowned, into the darkness," I keep repeating. I don't know why. There is a cloud bank in the west so that we cannot see the sun. But it must be setting. We are roaring down into the shadows over Laguna de Terminos, where a small river flows into it. Hundreds of ibis and egrets flutter out of the bushes in distress at our noise. We flatten out at fifty feet above the water.

5:27—Not a minute to waste if we are to make Carmen before the last afterglow has faded.

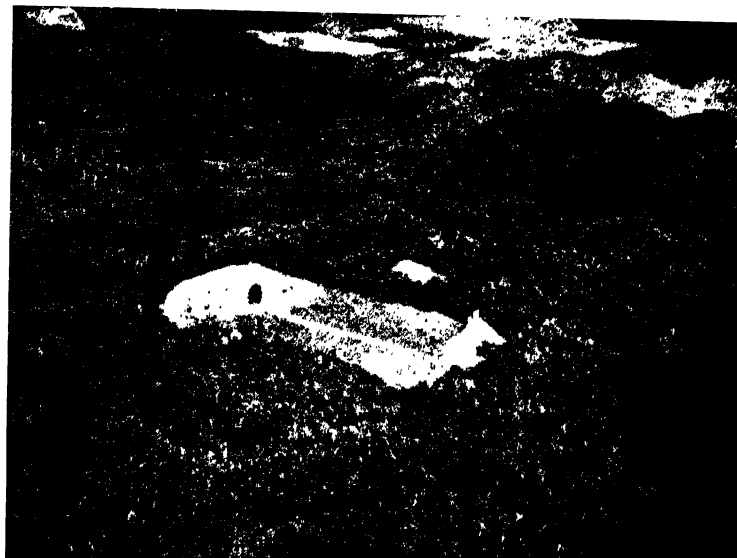
5:40—One of the pilots throws a switch which turns on tiny electric lights in our cabin. The darkening lagoon is mysterious but calm. According to our chart, it is shallow



(Fairchild Aerial Surveys Inc.)

(top) Ruined city of Uxmal from the air. Long building in center foreground is the "House of the Governor," 330 feet long. Quadrangle in upper right is the Nunnery Quadrangle, with "House of the Magician" just east of it (a pyramidal temple). Crenelated structure at left is the "House of the Doves."

(bottom) Another view of Uxmal.



(Fairchild Aerial Surveys Inc.)

(top) As much of the ruins of Labna as have been cleared by the
Mexican Government.

(bottom) The ceremonial center of the ruins of Kabah.



(Fairchild Aerial Surveys Inc.)

(top) Gorge in the upper Usumacinta. No use looking for ruins from an airplane in broken country like this!

(bottom) Laguna Margarita, discovered by us in Chiapas, Mexico, and named for Mrs. Percy C. Madeira, Jr., wife of the director of our expedition.



(American Museum of Natural History, N. Y. C.)

We flew over the ruins of Yaxchilan, which has fine sculpture like this lintel. A priest is shown at right making an offering to a god by drawing blood from his own tongue with a rope set with thorns.

enough everywhere to anchor. We swing west, running nearly parallel to the sandbar which is the farther boundary of the lagoon.

5:52—A light—the airport of Carmen. More lights, southwest of it—the village on the banks of the river.

Ormsbee circles the field carefully. There is a dark blot of people waiting there. Ormsbee swings to the southwestern end, cuts off his power, drops, drops through the still tropical darkness. The wind has almost died with the sun. Ormsbee never wastes a foot of landing field. It seems he must strike some low trees, but he's over them. Our keel is dragging on solid land. This afternoon we have nearly crossed Central America twice. We bump down to the other end of the field, turn slowly and taxi back.

Smith opens the hatch and we tumble out. Two pleasant, plump, distinguished-looking Americans come up. They are rather excited. They have been waiting two hours and thought maybe . . . Well, so did we.

Ormsbee comes around grinning, and whispers in my ear.

"Fifteen gallons left," he says, "or twenty minutes' flying time. Guess that's cutting it a little close."

The next morning we flew up the Usumacinta River, and stopped off at the village of Tenosique. Now we would see how the amphibian plane acted as a river boat. When we circled over Tenosique, looking for a place to land, we put the village into a panic. All the men, women, and children ran into their thatch-roofed houses. All the cats, dogs, chickens, and pigs—which share their huts with them—ran out of the houses. Howling and squawking, they fled into the bush after the horses and mules which already had galloped there.

We hit the river about a quarter of a mile below the

village and threw up a huge bow wave of mud-colored water. The seven-mile current against us stopped the ship abruptly. Carey went out on the bow, fished the anchor out of a hatch, and heaved it overboard. Smith threw a spinner astern, unreeled line from the pole he had brought, and began to fish.

"Look out for that log," Madeira yelled. The river was full of logs, and a huge one was bearing down on our starboard wing. I climbed out on the wing and caught the boat hook which Carey threw me just in time to jab it against the end of the careening log. It hit the point of the boat hook with the force of half a ton. It was diverted just enough so that instead of tearing the delicate fabric of the wing it struck the metal pontoon a glancing blow and swung sluggishly outstream. The pontoon was dented, but not punctured.

Several dugout canoes had put out from shore and were coming along pell-mell with flashing paddles, racing to see which would reach us first. I got my movie camera ready, foreseeing dramatics. Our anchor had just caught with the extra cable Carey gave it, but the weight of a log canoe hanging to us might break it loose again. Also, we were fearful for our struts and stays. The onrushing paddlers seemed to have some last-minute compunction against crashing into our fragile hull, but they were totally oblivious of the delicate wires which the upper ends of their paddles were threatening.

"No choque, no choque!" we roared in chorus.

With the six of us bellowing at them to keep off, the two foremost canoes collided and one upset. Ormsbee threw a line, but the current had carried both boats beyond his reach. There was nothing we could do but watch and take movies. Fortunately, no one drowned under the lens. All

the swimmers except one climbed into the other canoe. The lone swimmer succeeded in getting his own craft right side up, straddled it, and paddled with his hands, eventually reaching shore about a mile below us, despite crocodiles.

Alden Mason went ashore in one of the dugouts. He wanted to complete arrangements for a ground expedition to Piedras Negras to follow the airplane flight. There were stelae (monuments with hieroglyphs) there to be brought out for the University of Pennsylvania's Museum, where they are now on exhibition. His instructions to laborers kept him for two hours. Meanwhile, the rest of us watched the slender anchor line trembling in the yellow flood and cursed him, as we fearfully warded off logs.

When he returned, we got off, after several seconds of the big motors' preliminary metallic sighing. Many other masses of water, limpid pools and lakes of rain water, were visible among the trees from the air. We followed the river upstream, its course easily distinguished by its dirty-yellow color. Then we turned west above the ruins of Yaxchilan, leaving the river—and Guatemala beyond it—behind us. We were headed over a wild piece of the Mexican State of Chiapas which has been explored very little. It is a God-forsaken region called El Desierto.

I was thinking of Cortes as we kept climbing up, up, from three thousand feet at 2:52 to sixty-one hundred feet at 3:03, with our ears cracking. Cortes' letters to Charles V of Spain describe the difficulties of his little band of Spaniards and their Indian allies, floundering through the swamps of the Usumacinta region. They hewed down trees to build bridges and corduroy roads. They scaled cliffs or painfully detoured around them, reeling through gorges bristling with thorns that stabbed and vines that tripped them, on their famous march from Tenochtitlan in the Mexican highlands

to the shores of the Gulf of Honduras. Viewed either as a military tour de force or as an example of the power of human will to conquer appalling odds, this march compares favorably with anything ever done by any of the great leaders of history. I do not except the deeds of Alexander the Great, Caesar, Hannibal, Charlemagne, or Napoleon.

We have had to fly low even in the flat country we have come from in order to find ruins—to get those bulges of buildings against the horizon. But when you are in country like this, with the land all “wrinkled like a giant’s bed-clothes,” as Jack Reed used to say, and haired like a giant’s face, you certainly cannot find ruins. In the first place, why should anyone have wanted to live in such country? In the second place, even if they lived here and left behind them limestone testimonials, how can you tell a limestone testimonial from natural limestone?

Plenty of natural limestone is sticking up around us on the horizon, but we are wise and weary. We no longer prod the patient Ormsbee with frantic little observations:

“Looks like a ruin two points on the port bow.” Or, “Take a run to the white thing near that big crag on the starboard beam, under a thundercloud shaped like Herbert Hoover.”

The airplane seems absolutely useless for archaeological exploration in such country as this. All we saw this afternoon were three things:

1. A lovely, big lake, about ten miles north of Lake Petha, not shown on any existing map. We took the liberty, therefore, of naming it Laguna Margarita, in honor of Mrs. Percy C. Madeira, Jr.

2. Three huts of the Lacandon Indians, shyest of all extant Central American aborigines, and therefore wisest. The three huts were tucked away on one of the northerly

fingers of Lake Petha—two huts for married couples, a bigger hut for God. What could be fairer than that?

3. A rainbow, sighted in the northeast over Carmen, as we approached Carmen.

As we start the next morning we realize that this flight has been a flop. Nobody says it, but everyone knows it. We haven't found a thing except that small cluster of unimportant mounds outside of Valladolid, a possible "new" ruin on Cozumel, and the causeways out of Coba.

Our mood of discouragement is broken, dramatically enough, by Ormsbee at 11:52 A.M.

"Big mound on the southwest horizon. Shall I go there?"

On the starboard bow is something so big it looks like a volcano, even though it is thirty or forty miles away. We are in the rainy season, but have not had a drop of rain yet, and the visibility is excellent.

Eleven minutes ago we passed over eight Indian huts. But now there is no evidence of humanity in sight except another airplane hanging on our starboard quarter and far below us. When we turn, it turns too. No plane would be here except on an errand similar to ours. We watch it carefully and find that it is on the same errand. It is our own shadow!

All four of us are aft, craning our necks to look around the pilots' bodies at that huge knoll. We may be missing something on each side. We are not keeping a proper lookout in those directions. The country is all flat except for a long ridge from northwest to southeast, and near the top of that ridge is the conical mound which is our goal—incredibly large even for a pyramidal temple mound.

Soon we can see three other mounds, one to the east and two to the west of the big one. All of them are slightly

nearer us. Until we descended to a thousand feet they were indistinguishable from the jungle behind them. We bank twice around the big pyramid, descending and closing in on it all the time. Halfway around the second time, as we swoop past the southern face of the pyramid, we get a glimpse through the trees, brief but unmistakable, of the gray limestone walls of a temple.

Here, on the northeasterly slope of this ridge, was once a big city.

Cruising about, we sight two other conical excrescences about eight miles south of the last group. Another city!

It is maddening that we cannot land at these places nor, apparently, at any spot within two or three days' foot travel from them. The bush is too solid. But the location of the ruins stamps the flight a success, just when it had seemed a failure. Sooner or later, other expeditions will come on foot to collect the remnants of vanished splendor from under the shrubs and vines that surround the bases of the tree-covered pyramids. Any reader of this book who is archaeologically minded is free to go there on a ground expedition, if he chooses. The larger city is in latitude 17 degrees 40 minutes north; longitude 89 degrees 50 minutes west.

What was apparently this city was visited in May, 1932, by a Carnegie Institution expedition consisting of Messrs. Karl Ruppert, John H. Denison, Jr., and John O'Neill. On page 91 of the Carnegie Institution Year Book No. 32, for 1932-33, appears this:

Mirador, the westernmost site visited (N. 17° 40'; W. 89° 50'), is perhaps that seen by Percy Madeira during his aerial survey in 1931 (sic!). It contains the largest and highest mounds that were encountered. There are at least 9 lofty pyramids, the largest and highest of which supports 7 good-sized mounds, of which the largest rises not less than 20 meters above the top of

the great pyramid. As there was no water, it was only possible to spend one day exploring. No standing buildings were found. A small piece of sculpture, perhaps from a stela, was noted reused in the facing of a low terrace.

The absence of water, of course, is more serious because of an expedition's four-legged animals, than because of its two-legged. One wonders what became of the ancient water supply? And whence comes the name, *Mirador*?—a fit name for this high place, for it means in Spanish *looker on* or, sometimes, *balcony*.

The two are near the southern end of the belt of ridgy, fertile country which runs generally north-south down the center of the Yucatan Peninsula. We had seen the ridge the day we were lost. I am willing to wager that there are many other undiscovered sites between these two and the border of the State of Yucatan.

"Cities?" you ask. "If you could not land, how do you know they were cities?"

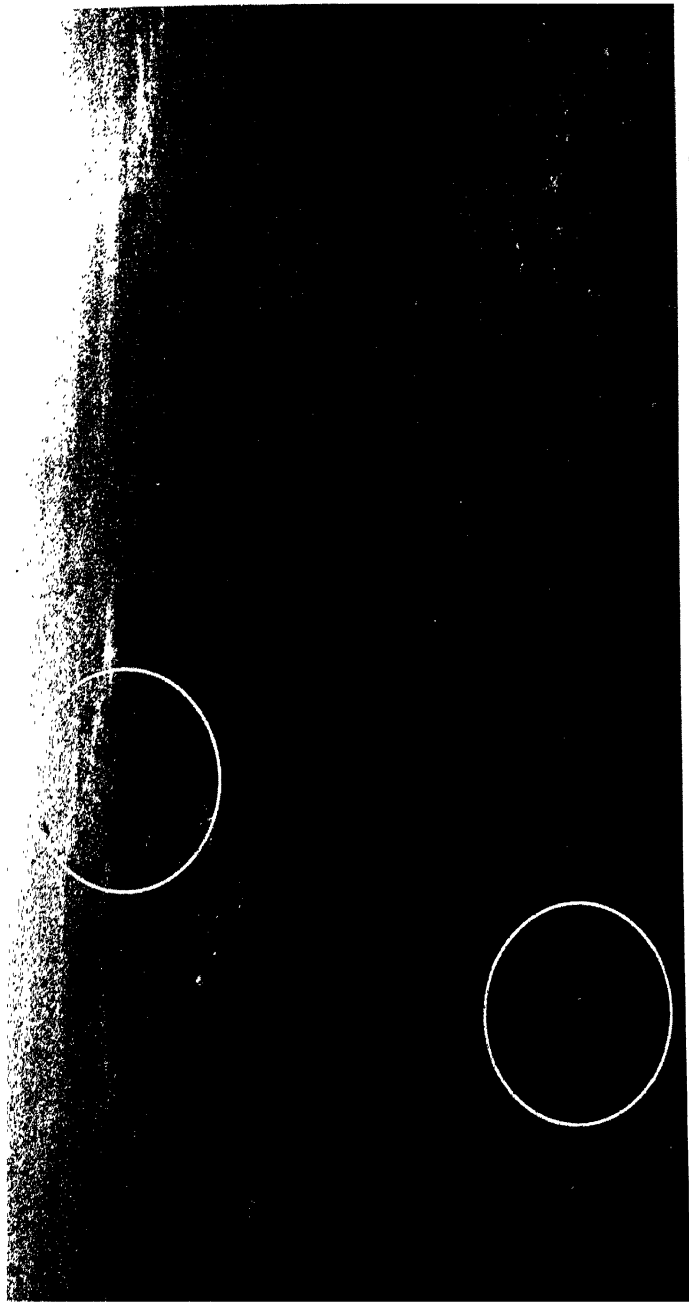
Well, I know there are twelve buildings at *Muyil*, which my expedition discovered in 1926, and there are many mounds where other buildings have gone to decay. Yet in 1930, from the air, two days prior to sighting the ruins which made our entire flight worth while, we could see only one building at *Muyil*. It was the high, westernmost structure whose roof, I believe, served as a post for keeping a lookout across two easterly lakes and the canal connecting them, so that the trading inhabitants might have a check on the nature of the craft coming down their waterways. At the two sites just discovered, four and two temples, respectively, were visible from the air. Since the peak of only one out of twelve known to be at *Muyil* is discernible to the flyer, it is fair to assume that there are many other

buildings around the four and two temples which were located from the air above the two "new" cities.

How many temples make "a ruined city" in the archaeological sense? Twelve churches rarely occur in close proximity to each other in the United States today, except in a good-sized city. A ceremonial center with twelve temples may be called fairly, in any age, the remains of a city. Remember that the people of those ancient times in Central America lived, like the natives of today, in wooden houses. The wooden houses have long since decayed. Only the public buildings remain, because they were built of stone. It is doubtful if anyone lived in the stone buildings, with the exception of those used as nunneries and monasteries. Near every one of them, there must have been scores or hundreds of the thatch-roofed habitations of the common people. We may be sure that these pyramidal mounds over which we circle, itching to get down there and unable to do so, mark the remains of a city.

The bush has torn down most of the buildings and covered the rest. But the bush has not swallowed the feeling of this old place. Its feeling is one of safety.

There is a wise old archaeologist named Edgar L. Hewett. He has taught many of the men who are the great American archaeologists today, or, if not the men themselves, their teachers. His pupils and his pupils' pupils are a little impatient with Dr. Hewett, because he does not think much of modern methods. He is a little impatient with his former pupils and their former pupils because he does not think much of their methods. Stratigraphy, for example, does not appeal to this old archaeologist. He believes that there are other ways of catching the picture of a dead city than by studying the things found in different levels of the earth when you dig where the city once stood. Dr. Hewett's



Ricceest of four cities discovered by our aerial expedition. This is in lat. $17^{\circ} 40' N.$,
(Fairchild Aerial Surveys Inc.)



(Fairchild Aerial Surveys Inc.)

(top) New city discovered by University of Pennsylvania Museum Aerial Expedition in Peten, Guatemala, lat. $17^{\circ} 32' N.$,
long. $89^{\circ} 50' W.$

(bottom) White object at right is lookout tower of ruins of Muyil as it appeared two years after we had cleared it of brush. Eighteen other Maya ruins are invisible in bush at center and right. Structures at left are two corrals and several huts of a village of the modern Santa Cruz Maya Indians.

method of re-creating the picture of ancient life in an abandoned Indian village is to go there alone, sit down, clear his mind of all preconceptions, and *think Indian*. If he wants to know where the former inhabitants of a town buried their dead, he says to himself:

"Now, if I were an Indian and lived here, where would I bury my dead?"

He attains extraordinary results by this perceptive method. He also saves a lot of energy wasted by some of the younger men, who seem to think that the only intuition an archaeologist may properly have is in the edge of his spade.

Perhaps it is by some similar process that I know that the spirit of this old city is safety. It is safety and peace, of a kind absolutely incomprehensible at the New York Athletic Club or Bailey's Beach or a board meeting of the Ford Motor Company or anywhere in any city of the United States.

Every man among the old Mayas was given enough land by the state to keep him in comfort. No one, apparently, was rich, but no one was poor. They were one of the least warlike nations that ever lived. Nonetheless, I doubt if we should be as happy under their system, with all its advantages, as we are under our own. We should not like the regimentation of a government which arranged everything for the individual. We would rather suffer and starve individually, while we wait and hope for a break.

I balance a pad on my knee to write a radio message, describing our discovery of two new groups of ruins, to *The New York Times*. The writing of the dispatch makes me sad. The brief sense of triumph fades into a sense of the timeless nothingness of things and a realization of man's futility. Why should "*The New York Times*, Philadelphia

Bulletin and associated newspapers" pay good money to hear how six idiots in a twin Wasp-motored Sikorsky amphibian risked their lives to tell the world the location of the remains of two of the innumerable cities of the old Mayas?

Archaeology at best is never creative. It is merely recreative, and there is its limitation. Archaeologists are merely trying to learn what man has known once and has forgotten. An unusual profession, perhaps, but it certainly sets one to wondering about the terms of man's existence here below. And when one thinks of all that man has learned about high explosives, poison gas, and other means of blotting himself out, and how the modern world is hanging by a thread above complete involvement in a war so terrible that the whole world may be left gray and still!

Chapter Four

SAN CLEMENTE

AFTER A DAY'S REST AT BELIZE WE spread our wings to the early morning air again and flew west. Fifty minutes later we hit the water of the westernmost of the twin lakes of Yaxha, Guatemala. The plane taxied up to a village of thatch-roofed huts, inhabited by Guatemaltecos whose blood and way of life is still mainly Indian. Thirty miles west of there, on Tayasal Island in Lake Peten, the last fragment of the Maya Empire held out against Spanish tyranny until 1699. Dugout canoes came out to meet us. There was wonder in the eyes of the paddlers, as there had been wonder in the eyes of the paddlers who came out to meet Columbus.

The plane left us and returned to Belize. We spent three days at a big ruined city halfway between Yaxha and Lake Peten, mapping the site and discovering a whole new plaza. Only three archaeologists had visited the site before us.

The city is called by the misnomer of San Clemente. A better name for it would be "THE CITY WHICH WAS BUILT SLOWLY BY PEOPLE WHO MEANT TO LIVE LONG WHERE THEY BUILT."

San Clemente has every principal feature of Maya archi-

ture except a ball court. That is a characteristic of northern Maya cities, supposedly introduced by the Toltecs when they came down from the highlands of Mexico about 1200 A.D. San Clemente is typical of the central Maya area. The long, low buildings are in "palace" formation around courts, with sculptured figures for façade decoration. Their interiors are adorned with mural drawings. There are stelae, stucco altars, and niches where incense was burned to the old gods. Stelae gladden the heart of the archaeologist more than anything else he commonly finds in the Maya area. Maya inscriptions consisted partly of abbreviated pictures of the thing intended or of an object associated with it. Phonetic glyphs have also been found. Only an educated minority understood this writing, which was invented independently of any Old World system. We are able to read some thirty per cent of the Maya hieroglyphs. Our knowledge, so far, is confined chiefly to numerals, astronomical symbols, and signs for natural phenomena. Unfortunately, time has blotted out the inscriptions which cover the faces of the stelae at San Clemente. We believe them to have been inscribed because the bare outline of part of an indecipherable glyph still remains on one monument.

The mural decorations found in several rooms at San Clemente include the "red hand," a common Maya symbol. There are several graffiti drawings—sketches made by scratching the wall. One shows a warrior protecting himself with a shield on his left arm, while his right arm hurls a spear. The earlier Mayas did not have the bow and arrow. They depended on the spear and dart thrower in offensive warfare. It has been suggested that the later Mayas, who undoubtedly had the bow, got it from the Toltecs of upland Mexico.

There is one drawing that is repeated frequently on the

**AFTER KARL SAPPER, 1897 AND F. BLOM, 1924
AS ALTERED BY UNIVERSITY OF PENNSYLVANIA MUSEUM, 1930
NOT ACCURATELY SCALED, DISTANCES AND HEIGHTS IN ROUND FIGURES**



interior walls at San Clemente. It is a triangular device which Blom and others have suggested is a symbol of the human female pudenda. Many well-meaning archaeologists have gone astray in their effort to interpret ancient symbolism, and the burden of proof is upon those who offer such an interpretation of these San Clemente drawings. As a rule, the Mayas scrupulously avoided anything suggestive of sexual matters in their art. The same triangular symbol of the Maya artist at San Clemente may be seen on several rock carvings, found in the bed of the Ohio River, which are on exhibition in the Carnegie Museum of Pittsburgh. Whatever that symbol signified to the ancient Americans, it seems to have had a fairly wide geographical range.

Karl Sapper, Sylvanus Morley, and Frans Blom visited these ruins briefly in 1897, 1920, and 1924, respectively. We found several structures, shown on the accompanying map, which apparently they did not see. We also failed to find a few things shown on the Sapper map, as revised by Blom. That is interesting, since it suggests how rapidly the jungle is doing its work of destruction. Two of the stelae which Blom reported as just south of No. 4 and No. 5 on the map could not be found. Stelae might easily be missed in the thick bush. It is more remarkable that we found no trace of two buildings marked *M'* on the plan. On the other hand, where this map showed only one building we found remains of at least three structures grouped about a distinct, elevated plaza, southeast of the main plaza ("East Plaza" on the map). That makes the fourth plaza now known at San Clemente.

We discovered a long, high mound with traces of masonry (No. 21 on the map) about seventy yards west of the main city. Two *chultunes*, or underground chambers, were just east of it. A round, stone altar, nearly buried in the

refuse of centuries, was found in front of each of the two high towers of Tikal-type architecture which mark the southern border of the main plaza. We were unable to turn either of the altars over, although we struggled long and valiantly. The job might have been accomplished easily by means of a small, carriage jack, such as I always take with me when not held down to the weight limitations of an airplane. It is possible that there are glyphs on the under surface of the altars, but there are none on the surface. The stones are about five feet in diameter, eighteen inches to two feet thick, and are quite clearly rounded in outline. They occupy identical positions in relation to the temple, whose stairway ends a few feet south of each of them. It seems pretty clear that they served some ceremonial purpose. A similar stone, smaller and less clearly rounded, was discovered in western Quintana Roo by Spinden and me in 1926. We uncovered it in front of the foot of the stairs of the highest temple at Okop.

The most important of our discoveries at San Clemente was less certain than the others. It was a find of Alden Mason's. There seemed to be the remains of an old stone road starting from the foot of the stairs on the eastern side of the southeasternmost pyramidal temple (South Plaza). The direction of the road seemed to be east. If these vestiges are, in fact, the remains of a stone road, the finding has much archaeological importance. No stone road had been found heretofore in the Southern Empire territory. Possession of stone roads and ball courts are two of the outstanding features of the culture of the northern Mayas. The northern Mayas are supposed to have gained many of their distinctive cultural features from the Toltecs. Ball courts may be one of these. The Toltec relation to the Mayas is a puzzling problem. We may learn, eventually, that many cul-



(Fairchild Aerial Surveys Inc.)

(top) Our amphibian plane landing at the Maya village of Yaxha, Guatemala.

(bottom) One of the pyramidal temples at San Clemente.



A "palace" at San Clemente. Madeira (*left*) and G. Mason (*right*) are holding flag of the Explorers Club between them.
(Fairchild Aerial Surveys Inc.)

tural features believed by archaeologists to have come to the Mayas from the Toltecs actually were adopted the other way around. The Mayas certainly gave many aspects of their civilization to the Toltecs. If stone roads and ball courts should be definitely established as traits of the southern Maya area, it might be reasonable to suppose that the Mayas, not the Toltecs, originated them.

These archaeological speculations may seem dull to the lay reader, but not if he realizes that they are like mysteries in a detective story whose chief characters are two illustrious nations of the past. The relationship of the Mayas to the Toltecs offers much the same fascination as a good murder mystery by Poe or Gaboriau.

We were obliged to work in a hurry at San Clemente. The necessity for haste was a matter of profound regret to us, as it was to the other archaeologists who preceded us. San Clemente was built slowly. It is well worth two or three seasons' work.

After our first half bucketful of black water from the local water hole was exhausted, we had to send an *arriero* twice a day to a camp east of us toward Yaxha. The canvas waterbags dangling from the mule were filled with a villainous-looking fluid, which was the only water procurable. Where did the inhabitants of San Clemente get their drinking water? The same question applies to many other ruined Maya cities. Uaxactun, for example, has no water hole at all. The lack of water is the chief obstacle in the way of the archaeologists of the Carnegie Institution who have been excavating those ruins in eastern Peten. The underground chambers, or *chultunes*, which are plentiful in the neighborhood of many sites, obviously were not used to hold water. Their bottoms were porous. It is believed that they were hollowed out by workmen hunting materials to make sur-

face buildings, then trimmed up to serve for the storage of grain and other dry materials. Their round entrances are about the size of a manhole in a New York street. It had been raining a few days before our arrival at San Clemente, as the muddy trail testified, but not a drop of water was standing in the chultunes. It is possible that some of the Maya city dwellers drank only rain water, as the modern Bermudians do.

On the fourth day after the plane left us in the bush, we return to the edge of the lake to await her. We are standing on the side of an arm of the lake knocking ticks off our clothing with switches when we hear a distant rumble. Here she comes like a huge heron, her body trailing out behind and below her wings. She swoops down, careens along two hundred feet over our heads with the speed and fury of a comet, and disappears over the trees.

Then she comes back climbing higher, circling, circling, a great bird looking for something, looking for a place to drop something. There it goes—a great white egg floating down slowly, snow-white through the bright sunlight, settling at last in the water. One of our Indians, whose racial stolidity chokes down the excitement in his breast, paddles across and retrieves it. The white egg is a wet crumpled shell now, not stiff as it looked in the air, but folded on itself like the empty egg of a snake. It is a baggage parachute attached to a five-gallon gasoline can containing sandwiches and iced beer. Sandwiches and beer brought here from Belize in fifty minutes, a trip which takes five days by river boat and mule in the ordinary way!

"One thousand years in fifty minutes," Madeira says, thinking of the ruins of the Maya town of Yaxha, over there on the far bank of the lake. Nothing the ship has

done yet impresses us so deeply with what the airplane will do to drive away the mists of dead centuries over the forests and mountains of Central America.

The ship lands on the lake. We paddle out and get aboard. Two canoes, filled with Indians, put out from the shore. We throw a line to the foremost, which passes a line to the second. We begin to taxi up to the village of Yaxha, towing the canoes in tandem. Dismay is written in the faces of the Indians—dismay and fear. They duck their heads into bent arms to guard their eyes against the tearing wind from our propellers. The first plane they have ever seen!

It happens to be the day of the Virgin of Guadalupe, a holiday for everyone in Yaxha. Everyone is on the bank, in best cotton shirts and dresses, watching and marveling at the huge water bird of the white man.

Yaxha marvels even more at the ice which Ormsbee brought from Belize for the sake of the beer. An Indian takes a small piece in his hand and almost cries when it melts away.

Yaxha is in rather high hills. At night you need two blankets even if you are married. Everyone in Yaxha is not married. Old Manuel, our chief arriero, has been urging us to stay in Yaxha. "We have seventy women here and only thirty men," he says.

The plane turns and faces the wind, as every water bird does in leaving the water. With the fussy rush of a frightened mallard, she clambers off the lake. The natives of Yaxha concentrate intently on the way the white man's big shining water bird is climbing, climbing. A wisp of cloud half seizes her. A whole cloud envelopes her. She comes out, goes back into another cloud, comes half out, a ghost

of all the water birds that ever flew through fog. Goes back again, goes back again, never comes back again to Yaxha.

And in the plane . . . "Push off, and sitting well in order, smite the sounding furrows."

N.C. 8044 rises and falls on the furrows of air.

On and on soars the plane. In eight minutes she has covered the distance to San Clemente, which it took us three hours to cover on foot. Ballistics, plane surfaces for air pressure, exploding particles of gasoline, what have you done to thigh muscles, femurs, and tibiae, beautifully articulating?

When he heard of our intention to fly over the Maya country, Dr. Spinden remarked to a newspaper reporter:

"There are three kinds of archaeologists now: air, bush, and dirt."

The dirt archaeologist knows the thrill the gambler knows. You crack open a burial mound and take out the jade and shell ornaments of a man who was a scientist and a scholar in Middle America when the British Islands were howling wilderness. You hold them in your hand with the same feeling of chance achievement that you know when the little white ball in roulette drops into the compartment on which you have put your money.

The bush archaeologist has a primitive satisfaction. He uses all of his faculties, physical and mental, in a struggle with the wilderness.

The air archaeologist sees things in a cutting perspective. He sees that some of the proudest cities ever raised by man are just little bulges against the horizon.

Our flight was over. Conclusions naturally grouped themselves under three heads: aeronautical, geographical, and archaeological.

We covered more than twenty-five hundred miles of the Maya area in eight days' flying. The terrestrial explorer would require something like a year to traverse that distance.

A great deal more is seen from an airplane than is seen from the back of a mule, but it is not seen nearly so well. A telephone between the pilot of the plane and the chief archaeological observer would be carried today. But we could not talk in the deafening roar of the motors. We were obliged to write a note each time we wanted the ship's course changed. That procedure lends itself to the loss of the landscape just glimpsed when a plane is traveling at its normal speed.

There should be a large altimeter and compass inside the cabin where the archaeologists sit. One of their number should devote himself entirely to keeping track of courses and altitudes in order to compare his data with that of the pilot. The other members of the scientific party should concentrate upon archaeological and geographical observations. Every man in the cabin should have a wrist watch. The time when notable objects of scientific interest are reached should be jotted down to the second. Each man's notes on a day's flight should be compared and written out fully immediately following the flight.

A big, powerfully motored amphibian, with such improvements, is a safe and efficient aid to exploration for archaeology in flat country. It can land and take off in comparatively narrow rivers with a current up to six or eight miles an hour, and on lakes a mile or so in length. Peripheral vegetation need not be a worry if the plane is not overloaded. Smaller planes can land on much smaller lakes, but their ability to combat the currents of swift rivers, such as the Usumacinta, might be less than that of a big amphibian.

The airplane is valuable for learning topography even in broken country covered with vegetation, such as El Desierto of Chiapas. Buildings and foundation mounds, sticking up against the skyline in the form of abrupt knolls covered with verdure, may be seen in flat country only when the plane is barely skimming the treetops. This is a dangerous procedure and we indulged in it only about one minute out of every ten we were in the air. It is not an unfair guess that, for the four cities we discovered, we missed from twenty to forty others.

The development of the autogiro has promise of much usefulness to archaeology. It can land and take off in a very limited area and can fall and rise over one spot for minutes at a time. We found it thrilling to bank around deserted, tree-shrouded temples at a hundred miles an hour, but a more stable and stationary ship would have permitted more accurate observation of architectural detail. Dirigibles would be handicapped by the strong winds of Central America and by the remoteness of reserve supplies of gas. The autogiro is the thing for this country.

Our specially made baggage parachutes and five-gallon-can containers demonstrated the feasibility of supplying ground explorers with food and other supplies from the air. There is little danger of the parachute's being lost so long as proper precautions for observation are taken both from the ground and from the air. A parachute might lodge in a tree, but cutting down a tree is easier for the ground party than waiting for supplies to come in by slow mule train.

At any altitude above five hundred feet color is more easily distinguishable than form. The white blot of ruined buildings like those at Chichen Itza and Uxmal, which have been cleared of vegetation, shows up for thirty miles

or more on a clear day. The outline of even a good-sized pyramidal temple, when covered with vegetation, melts into the surrounding green and gray unless the plane is very low. But we found that building mounds and the causeways of the ancient Mayas, which we sighted from the air, were distinguishable up to moderate altitudes because the foliage on them was always somewhat darker than the surrounding bush. That might be because the raised mounds and roads offer a higher, drier footing than the surrounding ground and therefore attract a different type of tree. A trained forester in an airplane doubtless could pick up stands of sapotes, mahoganies, and other trees of commercial value, merely by exercising his knowledge of the distinguishing color and texture of their foliage.

In some cases geographical and archaeological results of the expedition inevitably blend. We discovered a score or so of lakes not heretofore shown on maps. Most of the lakes are large enough for planes lighter than ours to land on and so may prove to be points of strategic importance in future archaeological exploration. Similarly, we discovered that four pieces of territory, totaling some forty thousand square miles, may be eliminated from plans for archaeological exploration. Three of them are too swampy, and one of them is too broken and rocky. The three swampy pieces are northeastern Quintana Roo, southeastern Quintana Roo back of Espiritu Santo Bay, and a large piece of Campeche and Tabasco east, southeast and south of Laguna de Terminos. The broken section is a strip of eastern Chiapas mainly north of a line from the ruins of Yaxchilan to Lake Petha. This is part of what is called by Mexicans "El Desierto." The location of the ruins of Coba and the ruins of Yaxuna are matters of interest both to geographers and archaeologists. Lake Bacalar, Lake Chichancanab and La-

guna de Yalahau were found to be placed wrongly on the maps. Lake Petha, the position of which is disputed among several existing maps, was located accurately. Laguna de Terminos was found to be only about two-thirds as wide as it is shown on the Blom-Ricketson-Spinden archaeological map.

The two chief sites we discovered from the N.C. 8044 are in a belt of rich fertile territory running down the center of the Yucatan Peninsula and containing perhaps fifteen thousand square miles. A few months after I published a description of this promising section in *The New York Times*, Mr. C. L. Lundell went there on foot and discovered two large cities. One of them, Calakmul, has more dated monuments than any other Maya city that has been found. Sixty-five stelae were located there, of which sixty-three were sculptured.

A method is needed by which sites discovered from an airplane can be marked so as to be found easily by a ground party. It may be possible to drop some chemical composition which will so affect the foliage that it can be detected readily by explorers on the ground. A suggestion made by Percy C. Madeira, Jr., Director of the University Museum Aerial Expedition, may have more force. He put forth the idea that some electrical device which will run for several days may be dropped at a ruin where it will be detected by apparatus carried by ground explorers.

The discovery of the range of low hills running south through the west central part of the Peninsula of Yucatan is more important than the finding of individual ruined cities. The range is much more extensive than any existing map had indicated. It almost certainly includes a good number of yet-undiscovered ruined cities. It begins just south of the territory containing such notable ruins as

Uxmal, Labna, Kabah. Draw a line from Uxmal to Tikal and you scratch the heart of this country. The hilly, ridgy track from Uxmal goes well south into Guatemala. Madeira suggests that it was part of "a possible route for the ancient migration of the Maya people from Guatemala to Yucatan." His theory is very persuasive. Other possibilities of such a route are in the more easterly line of elevated country. The latter includes the whale-back ridge southwest of Lake Bacalar and a comparatively elevated strip, through Santa Cruz de Bravo and the country back of Muyil, ending on the coast in the cliffs of Tulum.

Future expeditions would do well to concentrate their efforts in these regions. Institutions concerned with archaeological work in the Maya area might co-operate in maintaining an airplane, preferably of autogiro type, to work with ground parties and keep in touch with them by radio. By such means it might be possible, within the next decade, to discover nearly all the remaining Ninevehs and Tyres of ancient America. Our important hope in the discovery of "new" ruins is the possibility of finding inscriptions for our hieroglyph experts to study. We have to race with time and weather, which speed the destruction of the last of the written messages from the old Mayas.

Until all the glyphs have been deciphered, the most significant thing the archaeologist can do is to reconstruct the broad picture of Maya history from such mute evidence as he is able to find. Few recent discoveries give us such an appreciation of the immense power and glory of the Maya civilization as those great raised roadways radiating out of Coba, and one of which probably connected that city with Yaxuna, sixty-five miles to the west-northwest. Later discoveries probably will show that they also connect Coba with the coast near the sacred island of Cozumel.

It was an unforgettable sensation when the great flying machine banked around the lonely pyramidal temples which have stood there, in the uncomprehending bush, for immemorial years. The airplane represented perhaps the height of modern American mechanical ingenuity. The temples around which it flew were vestiges of the lofty, artistic feeling of the ancient Americans.

A different kind of pleasure—more intellectual but just as satisfactory to experience—comes from reconstructing the life and movement of prehistoric times along great arteries of commerce and religion.

Chapter Five

EQUIPMENT OF AN ARCHAEOLOGIST

CENTRAL AMERICA IS ONE FIELD where exploration must be conducted in the old-fashioned way. The mule remains the best "ship of the bush." Most of the mules in the region are owned by mahogany and chicle companies, so that the explorer is dependent upon their co-operation in transporting his personnel and equipment to the field of operations. Fortunately, the mules of chicleros become idle just when the trails become dry. The sap of the sapote tree runs slowly with the slackening rains, and the *muladas* may be acquired for the season of exploration.

Transportation is likely to be the largest single item in the explorer's budget. That is true, especially, if he hires mules, as he has to do when his work on terra firma is interrupted by trips on river or sea from one field of land operations to another. Mules may be hired at from one to three dollars a day, depending upon the demand and supply, local custom, weather, proximity of saints' days, and other matters. Muleteers cost about the same, plus their food, and you need one *arriero* to every six or seven animals. Two hundred pounds is the limit load for a mule. One hundred

and fifty works better, and on very bad trails with long *jornadas* (daily journeys) one hundred is enough. Twenty miles is a fair *jornada*.

It is cheaper to buy mules even if you have to sell at a great sacrifice when you are finished with them. Few explorers are as astute or as lucky as Frans Blom, who bought mules in January for forty dollars apiece and sold them in August at forty-two and a half dollars.

A Central American mule is not the big, sleek, proud beast known in the United States Army. He is about half-way between that majestic animal and an ordinary Mexican burro. He is a wizened runt, unkempt and covered with sores. His disposition is atrocious, his bad habits ineradicable. He will not stop while his fellows are moving; he will not remain standing for you to mount him when other mules have begun to go ahead. If the trail happens to widen and you wish to speak to a companion, dynamite will not make your mule walk abreast of another. Yet, arrival at a wider portion of trail is regarded by every pack mule as a proper occasion to turn and hasten rearward. If you manage to spur or whip a saddle mule out of a walk, his motion will be mostly up and down. Once a year, when you least expect it, he will endanger your life by bursting into a mad gallop through the low branches of trees across the trail. But . . . the horse is a rarity and the mule is everywhere.

The packing of mules is an art in itself. It is vital to have the burden on the starboard side of the beast approximately equal in weight to the luggage affixed to port. This results in much repacking, profanity, and tears on the part of *expedicionistas* who forget the first principle of mule travel until reminded of it at the last minute by their *arrieros*. The best piece of luggage to use with a mule train is a box or pannier of light fibre, technically known as a

kayak. Packing is difficult even with these, for ammunition weighs more than scientific books or maps. The latter are likely to weigh more than food which, in turn, weighs more than clothing. Therefore, belongings are considerably mingled. One never becomes accustomed to hunting for toothpaste among shotgun shells.

Saddles are a matter of personal preference. You will use whatever saddle is most comfortable for you, but you should be sure to have adequate saddlebags into which you can stuff *tortillas*, cold beans, and three or four limes and lemons.

Firearms for protective purposes are practically unnecessary on an expedition in the tropics. Many of the best explorers never carry a gun. Guns are no good against bugs and snakes. They are also of little use against irritated natives, who shoot from ambush, unless they poison your water. However, shotguns are good to have with you, for they increase your food supply.

Most of the countries from Mexico to Colombia have strict regulations against the introduction of rifles, which they regard as the forerunners of revolution. But they permit shotguns. You seldom can see more than a hundred feet ahead of you in the bush, so a shotgun is sufficient to secure wild turkeys, wild pigs, deer, *tepisquintli*, and other game. I always take a shotgun and a curious little invention known as "Marble's gamegetter."

The double shotgun should have the right barrel cylindrical and the left barrel choke; the barrel should be modified choke in an automatic or a repeater. The gamegetter is a device whose usefulness I first learned from Ludlow Griscom, the ornithologist. It consists of a skeleton stock, mounting two barrels, one over the other. The upper barrel is a .22-rifle barrel, which also will shoot shotgun shells to

kill small birds. Hence, it is valuable to ornithologists. The lower barrel is a smooth bore, .41- or .44-caliber barrel which shoots either a shotgun shell or a solid ball. If you use the solid ball, you have a very tangible reproof to any native who may bother you. You also have an implement which will kill a deer at two hundred feet. Another charming feature of the gamegetter has been discovered partly by poachers and partly by explorers of Central America. You can stick it down your trouser leg and it is invisible. If a customs official finds it, the display of a few of the .41 or .44 shells usually will persuade him that it is an escopeta and not a rifle or revolver.

The most useful arm or implement in the tropics is the machete, and it is absolutely necessary. The best machete, found all through Central America, is made in a small factory on a hill beside a pond in Collinsville, Connecticut. Natives of the American tropics use machetes to cut wood, to pick their teeth, to kill their enemies, and to open bottles. Archaeologists also find them useful as digging tools.

Trade goods are a necessary part of the equipment of every expedition that is going to deal with Indians. A ten-dollar investment in any five-and-ten-cent store will be worth a thousand dollars when you reach the bush. You must bear in mind that native children are mainly the people you are buying for. If you get in right with the children of the Indians, you are halfway toward winning the confidence of their parents. Almost any toy that would interest your own child will appeal to the children of the Indians. The one principle to remember is that Indian youngsters are much more interested in the pictorial than in the mechanical. A "kewpie" or a grotesque doll has more fascination for them than an imitation steam shovel. Their

ancestors were conquered by our ancestors because ours had mechanical ability and theirs had not. The Indians to-day are still like that. Most of the trade goods needed for adults may be purchased in the larger cities of Central America—Belize, Puerto Barrios, or Santa Marta. They will consist of tobacco, salt, machetes, knives, and nails. A machete should be used sparingly in trade. It is as valuable to an Indian as a Rolls-Royce is to a white man and should be given only to a chief or to a head medicine man.

Personal equipment must be selected carefully from the bottom up. Shoes are the most important item in the explorer's outfit. Even though you travel by mule-back, there is a good deal of walking in places where mules cannot go. Shoes wear out rapidly when their wearer is climbing pyramids and stumbling over the remains of fallen stone walls. Above all, take shoes that you know will be comfortable. Nothing can raise such havoc with an expedition as sore feet. The best bet is a pair of heavy knee boots designed for walking. Riding boots are impossible for walking and unnecessary for riding slow-gaited mules. It is better to take two pairs of the same type of walking boot and wear them a-foot and a-mule. I have known men who simply could not bear knee-length walking boots and who have gone into the bush with low shoes. One man—Vaillant, the distinguished archaeologist—made a trip into the jungle of Guatemala in tennis shoes. His feet were a sorry sight when he came out. Wearing low shoes results in the ankles' being slashed by thorns. Thorns are a further nuisance if you wear canvas leggings or puttees. The heavy, solid-leather type of puttee, when combined with ordinary shoes, is almost as acceptable as a knee boot. The disadvantage is that roots and twigs get in between the puttee and the shoe.

Experience has taught me that heavy wool socks are

more comfortable than light socks, hot though the climate may be. Woolen socks absorb perspiration and keep the feet cooler than silk or cotton or lisle would do. Most men that I know prefer a light wool sock, although I favor a heavy, finely woven one. Since my last expedition to the tropics, I have been playing tennis in northern latitudes without any socks at all. My feet have been cooler and less tender for being sockless. I am inclined to think that if I go back to the tropics on another expedition I shall wear knee boots without socks.

Trousers must be very light and very tough. Whipcord riding breeches are too heavy and too hot. Eventually, some clever inventor will find a form of cellophane or cobweb to make trousers for the tropical explorer. Meanwhile, I find that riding breeches of light khaki are the best. Second best are long trousers of khaki, tucked in under your knee boots. It is important that the trousers have plenty of pockets—a watch pocket, two side pockets, and two hip pockets—all as voluminous as possible. A belt must be worn even if the explorer prefers braces, for there are many gadgets, such as machete and canteen, which are conveniently hung from the belt.

The shirt also should have many pockets. At least, it should have a pair of roomy breast pockets for things too fragile for the trouser pockets, like cigarettes and matches. Matches should be wrapped in an oiled-silk bag, no matter where they are carried. A very good metal match safe is put out by Abercrombie & Fitch as a saltcellar. It is a little black cylinder and holds about fifty of the old-fashioned pine matches. Paper matches are no good on an expedition anyway. A flint and steel should be carried for emergencies such as a sudden immersion in a river, when all matches may be wet or lost.

A coat is out of the question in the lowland tropics. You will need one in the mountain country, however, such as the Sierra Nevada de Santa Marta of Colombia. A tempting thing about a coat is that you can give it a sort of hunting-pouch pocket, capable of carrying three or four quarts of miscellaneous matter. But even a coat made of as light material as your trousers is just too hot in the lowlands.

Some protection against rain is necessary, even though you go in the dry season. A poncho or a light, tough raincoat is a blessing in the mountains where nights are cool, or in the lowlands when one of the rare northers is blowing. A raincoat has the advantage over a poncho of having pockets.

As the feet are the most important part of the explorer, the head is the least important. The pith helmet or topee was invented by the British as a sort of psychological compensation for living in the worst climate now occupied by white men. There is no need to cover your head in the tropics any more than there is need to cover your head on the Fourth of July in Riverside, Connecticut. Hats have produced male baldness which has, in turn, increased business for the hat manufacturers. I have been on the equator, both in America and in Africa, without wearing a hat in the middle of the day. I do not subscribe to the popular song: "Mad dogs and Englishmen stay out in the noon-day sun." Anyone may stay out in the noon-day sun who has an ordinary thatch of hair. Of course, all intelligent persons are asleep at that hour. (The *siesta* is the equivalent of the northern custom of not getting up before sunrise on winter days when the temperature is twenty below zero.) If you want to wear a hat in the tropics to keep the sun out of your eyes, wear a light, canvas hat with a colored visor such

as sailors wear on Long Island Sound in the summer. The only use of the pith helmet is to serve as a buffer against the lashing blows of branches when you are riding through the bush. To an archaeologist, it is also a good protection against falling rocks. However, an ordinary five-gallon gasoline can, stuffed with cotton, is better. It also has the sentimental advantage of resembling the helmet used by the Spaniards when they fought the Mayas and Aztecs.

The question of how to sleep is one that cannot be left to chance. The explorer goes to sections of the country that have no native habitations. If he is digging near a native village, he will not find the natives' beds of sticks very comfortable. And if he is a sizable white man, he is too big for the average Indian hammock. The rule, therefore, is to take your own bed. Having tried both folding cots and hammocks, I side with the majority of explorers of this area who vote for the hammock. It weighs much less. It takes up much less space when packed on a mule. Once you get used to it, it is much more comfortable than a cot. William Beebe, in his *Edge of the Jungle*, wrote a most moving rhapsody on the pleasures of sleeping in hammocks. Of course, one of our clumsy, summer-porch hammocks will not do; it must be a Carib hammock:

. . . slung with just the right amount of tautness; then the novice must master the knack of wind'ing himself in his blanket that he may slide gently into his aerial bed and rest at right angles to the tied ends, thus permitting the free side-meshes to curl up naturally over his feet and head. This cannot be taught. It is an art . . . to rest upon a couch cushioned and resilient beyond belief. He finds himself exalted and supreme above all mundane disturbances, with the treetops and the stars for his canopy, and the earth a shadowy floor far beneath him. This gentle aerial support is distributed throughout hundreds of fine meshes and the sole contact with the earth is

through twin living boles, pulsing with swift running sap, whose lichened bark and moonlit foliage excel any tapestry of man's devising.

The Central American hammock is made, like a London suit of clothes, to fit the user. As Beebe indicates, the proper method is to lie not lengthwise but crosswise, catching the edge of the hammock in your toes and stretching it out beyond you while you hold the other edge in your hand or over your head. This sounds complicated, but it is very easy once you get the knack and it provides you with a flat, perfectly soft, gently swaying bed.

The hammock, an invention of the American Indian, is at its best in Yucatan and Colombia. The Yucatan hammock of cotton is softer to the touch of the northerner. For comfort as well as beauty I recommend a hammock of colored cotton made by the Goajiro Indians of northeastern Colombia. The worst hammock is one made of a very scratchy type of henequen. On hot nights you often want to sleep practically naked. Another insufferable hammock is the kind that hangs like a trough.

Hammock comfort is largely dependent on hanging your hammock properly. Many natives hang a seven-foot hammock in a nine-foot space, but this will not do for you or me. The right way to swing your hammock is to stretch it almost taut, and to do this you have to have rope space at each end. In the bush ^{you} you can nearly always find two trees properly spaced but in native huts there often is not room for such adjustment. I slept in a Kagaba hut in the mountains of Colombia with my twelve-foot hammock adjusted to a circular room only ten feet in diameter.

You can always replace a hammock at the nearest native village, but if you break a cot you cannot replace it. There are few places in Central America where you can sleep on

the ground safely. Usually, there are powerful reasons in the shape of insect life why you should not. The most deadly of these reasons is not the snake, which leaves you alone if you leave him alone, but the chigger. Chiggers are acquired after dark when the bare human foot touches the ground. The chigger is a flea which likes to lay its eggs under the human toenail with the frequent result of blood poisoning.

You must be careful what kind of a tree supports your hammock. Do not hang it from a tree full of red ants. Do not hang it to one of several varieties of poisonwood trees. Touching one of these trees is enough to take the skin off all parts of the hands that touch the bark. Do not tie your hammock rope to a variety of tree consisting of an outer shell with a core of pith. Do not hang your hammock to a dead tree. I did it, after being experienced enough to know better, at the hacienda of Yolata in Quintana Roo. There were just three trees at this water hole, all dead. But they looked solid enough and I was told that Indian travelers hung their hammocks there. I am heavier than most Indians, and when I got into my hammock a tree fifty feet high and more than a foot in diameter came crashing down on me. I rolled out of the hammock sideways so that a knob on the tree struck the hammock where my head had been. I was pinned to the ground by the right leg, which was not broken but so badly bruised that I had to put off the further study of the ruined city of Ixil, which I had just discovered nearby. I have never been able to return.

Tents are too hot for the tropics, even if the sides are made of mosquito netting. Abercrombie & Fitch has an invention devised for the Chicle Development Company. It is a piece of canvas fifteen feet long and six feet wide. A mosquito netting falls from each edge of it and is formed,

at the pointed ends, into sleeves through which the hammock rope passes. Hang your hammock under this canvas and no insect can get at you. Chiggers are kept away by a piece of canvas soaked in eucalyptus oil and placed on the ground.

It isn't necessary to provide this sort of tent for laborers unless the expedition is going into country unusually thick with insects. The Central American *mozo* is so accustomed to insect life that he thinks little of it in ordinary form. Species of wild palms with broad leaves grow in most regions and laborers quickly make shacks of the palms, capable of keeping off the rain. The commonest of the palms is called *manacca* in Honduras. The *manacca* shack is the normal habitation of a large part of the population of that region.

From January to March the low coastal regions of Central America are visited by occasional two-or-three-day storms called *norther*s. When a *norther* is blowing, the temperature may fall to as low as sixty-eight degrees Fahrenheit. After the ordinary temperature of the eighties, that seems like freezing weather. You will need at least one, sometimes two, blankets in such weather. The art of keeping a blanket about one in a hammock is very hard to learn. A compact bag can be secured, proof against all rain but a cloudburst, in which both hammock and blankets may be stowed and packed on a mule. I find that two light blankets are preferable to one heavy one and take up no more space.

The food problem is easy for the man willing to subsist on the native staples: beans, rice, and tortillas. The latter are thin cakes of corn flour, purchasable at most Indian settlements. A few cans of more variable food are welcome to the American when game is hard to get.

Scientific equipment begins with spades, pickaxes, and

trowels. Orange sticks are necessary for picking the compressed, dry soil out of delicate parts of human crania. A good carriage jack and a reflector are indispensable in Central America. The jack is to hoist up and turn over fallen stone monuments. An ordinary piece of tin of the size to fit inside a kayak is as good a reflector as I know. It is used in photographing glyphs, and you must have a flashlight and plenty of bulbs in order to play light off the reflector against the ancient writing.

Toilet paper must not be forgotten, for more reasons than one. It makes excellent material for taking an imprint of stone hieroglyphs when it is moistened and rolled up into a mash. The imprint of writing on the mashed-up paper must be covered with varnish to keep it intact. Coarse wrapping paper or newspaper is an inferior substitute for toilet paper in this work.

It is well to be prepared to handle occasional finds in the other departments of the science of anthropology. A crude knowledge of what is taught under the heading of "museum methods" in universities would be a help.

Anyone who can afford it should take a doctor in his expedition. One who is experienced in tropical diseases would be preferable. It is sometimes possible to get a young interne or medical student to go along for his expenses and the experience he knows he will get. I have never had the benefit of a doctor with any of my expeditions. I have been lucky in falling sick only once in the field. That was on the coast of Yucatan, in reach of a boat to carry me to English hospitals in Belize.

The tropical diseases you are most likely to meet are malaria and dysentery. I have had three outbreaks of tropical malaria in New York, after my return from expeditions. A type of benign tertian malaria, which I acquired in

Colombia, might have proved anything but "benign" if I had not been fortunate in having as my doctor Zachariah Bercovitz of New York City, who is a well-known parasitologist.

Anyone who falls ill with malaria in Central America should ask the advice of the United Fruit Company or the Panama Canal Corporation. Such organizations are forced to deal with the disease wholesale.

The Burroughs-Wellcome Company puts out an excellent medical kit, indispensable to a tropical expedition. It contains enough quinine to stave off a bad attack of malaria and enough bismuth to take care of the immediate requirements of a bout with amoebic dysentery. It also contains iodine, one of the best medicines you can take to the tropics. The one useless thing in the kit is a so-called "snake pencil." It is a little black cylinder with a scalpel at the end and a hollow interior containing black grains of permanganate of potash. Permanganate of potash is ineffective in cases of snake bite. It merely cauterizes the wound and seals up the poison. Your kit should be supplemented with a snake serum put up by the Mulford Laboratories of Philadelphia.

Snakes are of negligible importance in the tropics. You will scarcely ever find one unless you look for it. The ancient Mayas adopted the snake as a symbol of wisdom. So did the ancient Egyptians, Sumerians, and Assyrians. The serpent has little chance of surviving in the biological struggle because he is an easy prey to ants, the only creature existent which seriously threatens the supremacy of man. Man can do much more against the ants than can the serpent, and man never has been seriously threatened by the snake itself. It is an axiom in the tropics that only the fool is bitten by the snake. A more important axiom is that only

the coward is *killed* by the snake. Seventy-five per cent of the deaths resulting from snake bite are cases of persons who were scared to death. Some maim themselves in panic, like a man in British Honduras who cut out half his calf to get rid of the venom. He bled to death. Others die of sheer fright, as nearly did a man bitten by a harmless snake in Honduras, according to the 1928 report of the Medical Department of the United Fruit Company. Convinced that a fer-de-lance had bitten him, he developed all the symptoms of fer-de-lance poisoning—short of death.

Most explorers prefer to travel as light as possible. Others like to take a good many small luxuries with them. The eminent authority on Maya hieroglyphs, Dr. Sylvanus Griswold Morley, is one of the latter. Americanists could tell many stories about Morley's mule trains, with five out of ten mules carrying cold cream, shaving soap, phonographs, and radio equipment. Incidentally, there is too much static in Central America for most explorers to bother with radio, but a phonograph may be very useful. A small one saved Morley's life when he was captured by Indians in Quintana Roo. Gossip has it that his Beethoven records, not his jazz records, so engaged the enthusiasm of the Indians that they decided not to kill him.

On the other hand, I once decided not to take a radio on an expedition to the same territory. I felt amply justified when the chief of a tribe noted for its hostility to white men said he would not let us pass through his territory until we had proved that no wireless magic was hidden about our persons.

Chapter Six

THE EAST COAST OF YUCATAN

MY EXPLORATIONS OF THE ANCIENT Maya civilization began, like those of the Spanish conquerors, on the East Coast of Yucatan. From there I worked southward along the rim of America's own sea, the Caribbean Bowl.

The east coast of the Yucatan Peninsula is a stretch of some four hundred miles of mainly low, sandy, and coral-line shore from Cape Catoche in the north to the Gulf of Honduras, where the Central American coastline abruptly turns from a north-south to an east-west direction. The northern half of this coast is Quintana Roo, a Mexican territory carved from the State of Yucatan in 1902 because of Mexico's difficulties in governing the ten thousand virtually independent Maya Indians who are the real rulers of this wild, thickly wooded plain. The southern half of the coast—except for the last fifteen miles which belongs to Guatemala—is British Honduras, one of the two small pieces of continental America south of Canada which Great Britain holds despite the implications of the Monroe Doctrine.

The Maya architecture of the East Coast differs in many features from the Maya architecture elsewhere. The differ-

ences are attributed partly to the fact, discovered by one of my expeditions, that an inland water route isolated the region from the rest of the Maya nation.

There is also a geological difference about this part of Central America. All Yucatan, as already seen, is a limestone peninsula formed from a coral reef. It tends to be marked by short, even stunted vegetation; by underground rivers and underground lakes, and by the frequent round, sunken pools. The vegetation along the East Coast is particularly stunted. On the other hand, this section has the only river known in Yucatan. It is a small stream which Dr. Spinden and I found and it connects the seacoast, just north of Ascension Bay, with the ruined city of Muyil. Archaeological evidence indicates that the country was not so rich agriculturally as other parts of the Maya area. By the same token, it had the lead in industry.

Nineteen details of architecture typical of the East Coast should be described. Six—discovered by my expeditions—were new for the whole Maya area. I also found additional examples of the thirteen known already. These thirteen are as follows: (1) unoriented buildings, (2) roads, (3) faces carved in relief, (4) Toltec pillars, (5) mural paintings, (6) painted stelae, (7) red hands, (8) characteristic altars, (9) gnomons, (10) small shrines, (11) circular buildings (first found on the East Coast by me), (12) property walls, and (13) walled towns.

1. All the northern part of the Maya area, especially the East Coast, is distinguished from the southern part of the area by a lack of orientation of buildings around a central acropolis. Maya buildings in the south are arranged about plazas laid out with regard to the points of the compass. This is not so in the north. I know of only one city on the East Coast planned about an acropolis. It is Ollitas

(Little Jars), at the mouth of the Sarstoon River, which I discovered in 1928. It has true orientation of buildings, but it is in eastern Guatemala at the eastern end of an inland water route where the influence of the great oriented cities of the south would naturally have been exercised through flotillas of huge trading canoes. Muyil also has a carefully oriented pyramidal temple and stone road.

2. *Sacbes*, raised stone roads, are one of the most remarkable features of Maya culture and, indeed, of all American Indian culture. They are found in abundance in northern and eastern Yucatan but are not so common in the central part of the Maya area. The most southerly piece of road yet discovered probably is the fragment of one at San Clemente, described in Chapter Four. The roads of the Romans are famous for their excellence, but the roads of the Mayas were broader and were built more durably. Many of them, if cleared of trees, would be navigable today for a Ford car.

The Mason-Blodgett Expedition discovered the ruined city of Ixil (pronounced *Eesheel*) some thirty-five miles south by southeast of Valladolid, on the western border of Quintana Roo. This was accomplished when I made the first complete crossing of northern Quintana Roo ever made by an archaeologist. That was in 1928, two years after Spinden and I had been the first archaeologists to cross southern Quintana Roo. The chief importance of the discovery of Ixil, so far as is yet known, lies in the fact that the city is situated between the end of the lake and the end of a huge ancient road, some forty feet wide and two to ten feet high. The raised causeway terminated at the foot of a stone stairway, mounting a pyramid of impressive dimensions: seventy feet high on the southeast and southwest sides; sixty feet high on the northeast side above the road.

The pyramid loomed to a hundred feet above a ravine, where the bodies of victims of human sacrifice were pitched after the high priests had offered their steaming hearts to the idol in the temple. Only a pile of stones marked the site of the temple.

The absence of features of Toltec architecture indicated considerable antiquity. The presence of heavy stone construction and the complete collapse of all save one of the buildings were further indications of great age. My belief is that the city probably was built in the fourth or fifth century after Christ.

Indians told us that there are other ruins on the south side of the lake of Ixil. They said that the road runs northward to the south end of the lake of Xkanha, where there are other ruins, outskirts of the city of Coba. I had long maintained that the causeway, which Mr. J. Eric Thompson and Dr. Gann found between Chichen Itza and Coba, continues beyond Coba in a southerly direction. Our discovery of this marvelous road at Ixil supported the contention. The Indians said that Coba is situated twenty miles north of our ruins.

We found the remains of seven buildings during an hour spent at the ruins. The smallest building, which was still standing, was of a late period of architecture. That indicates that Ixil was inhabited for a long time. Two buildings of earlier construction were almost buried in the humus caused by centuries of decaying trees. The fact that the great road continued from Ixil to Coba and Chichen Itza indicates the importance of Ixil to the civilization in which it flourished.

We had come upon the ruins in late afternoon and were forced to leave before darkness cut us off from our distant camp. It was our plan to return next day. As I have related in Chapter Five, I suffered an accident that night when a

tree fell on me in my hammock, preventing my return. I should like to follow that causeway to Coba and return to see if it occurs again on the south side of Lake Ixil. During my flight with the Museum of the University of Pennsylvania's air expedition I was unable to locate the ruins from the air.

3. I have found examples of faces, on the walls of East Coast temples, carved in relief instead of being affixed to the surface in molded stucco. Molded faces also are found on buildings on the East Coast, but those carved in relief are peculiar to the region. The pyramidal temple at the ruins which Dr. Spinden and I named Muyil had relief faces of old gods on each corner.

4. The so-called "Toltec pillars" look somewhat like the plainest of Greek columns. Their oldest known occurrence is on the west face of the main temple at Tulum. I have found them at Muyil, Paalmul, and on Cozumel Island. In the latter instance, they were marked by raised stucco faces on the surfaces of the pillars.

5. The use of wall paintings, both for tinting and for true murals, is common on the East Coast. I found examples of both at places previously unknown. The murals were in a very small shrine at Muyil. Unfortunately, they were reduced to a state of decay which made them hardly worth copying. Paint for tinting walls, either inside or outside of buildings, was found at Muyil, Acomal, Ucul Ha, and Chakalal. There were three temples at Chakalal, one on the shore and the other two about a mile inland. The shore temple has a mural showing a sacred serpent and a sacred jaguar painted in a style like the *Tro-Cortesianus Codex*, one of the three Maya books not destroyed by Spanish bigotry. This is a style quite different from that of the murals at Tulum, Chichen Itza, or Santa Rita.

6. One of the painted stelae, characteristic of the East Coast, was found at Muyil.

7. The red hand is found frequently on the East Coast of Yucatan. In the early days of Maya exploration there was much speculation about its significance. Schoolcraft, who wrote most learnedly about it, believed the red hand to be a symbol for power. That is still as good a guess as any. The device was made in three ways. First, a human hand was dipped in red paint and pressed against the wall. Second, fingers and hand were outlined with a fine brush dipped in red paint. Third, it was made by free-hand drawing. The first type is the one occurring most frequently on the East Coast. My expeditions found examples of the red hand at Chakalal and on Cozumel Island. The latter were remarkable in that they were conventionalized so that the five fingers looked like flower petals—a purely decorative use of what may have been a political symbol.

8. One East Coast type of altar differs from other types found in the rest of the Maya area. This might be called a "table altar." Usually four or five feet square, one or two feet high, and set against the back walls of temples, these altars somewhat resemble small, platform mounds. In some cases this imitation is strengthened by the presence of a diminutive stairway to the top of the altar. Lothrop suggests that they may have been "the foundations of shrines built of wood." There is no doubt that copal incense was burned on them and is sometimes so burned by the modern Indians. I found abundant evidence that they had often supported terra cotta statuettes. Some of the latter were of a type to be expected in Mexico well to the west of the Maya area.

9. A small temple in Acomal had before it, on an outdoor altar, a piece of stucco shaped like a pineapple. It was

approximately two feet high and about half that in diameter at the base. I sent a photograph of it to the late Zelia Nuttall, eminent archaeologist. She believed that the pineapple-shaped object was a gnomon for measuring the shadow of the sun. She thought it was a sundial which referred to the season rather than to the hour. Mrs. Nuttall did a great deal of investigation concerning Maya devices for this alleged purpose. Her theory was that shadow was measured so that the ancients might know when the sun was directly overhead at noon—an important time in the lives of agriculturists. Proof of her interpretation of gnomons has not been established. However, it deserves consideration.

Conical stone excrescences, about a foot high, on a temple at Chakalal, should be mentioned. So should a stone triangle atop a two-foot high stone pillar over a door on a small temple three miles west of Molas Point and half a mile south of the beach on Cozumel Island.

10. Many of the famous small shrines of the East Coast are as tiny as a building which Spinden and I found at Chenchomac (The Well of the Fox). It is a miniature temple with inside measurements of ten feet six inches, by four feet six inches, by four feet. The shrine is located just east of Ascension Bay on an island formerly called Allen Point. Hydrographer Ogden McClurg of the Mason-Spinden Expedition proved the point to be an island. We found other small shrines at Xkaret, Muyil, and Ucul Ha.

Early explorers were deeply puzzled by these miniature temples. Le Plongeon had a theory that the Mayas must have been a race of dwarfs to have worshipped in them. That supposition may be overturned by another explanation which throws an interesting human light on Maya psychology. The Mayas admittedly were a people of very short

stature. But the fact seems to be that they erected a tiny shrine to a god if they were in doubt as to whether or not it would pay to worship him. When and if the worship of the deity seemed profitable, they built a much larger temple over the shrine, entirely enclosing it. A building within a building is fairly common on the East Coast. The world is indebted to Dr. Samuel K. Lothrop, of Harvard, for this explanation. It eliminates two puzzles: the riddle of the very low building, and the reason for enclosing a small temple in a larger one.

11. There is a much rarer find which raises an archaeologist's opinion of East Coast architecture. It is a circular building at Paalmul. We discovered it partly because of a "lead" consisting of a photograph of a coastal temple, made by the Carnegie Institution Expedition under Dr. Morley and Dr. Lothrop in 1916. Lothrop had written in his splendid *Archaeology of the East Coast of Yucatan*: "It is probable that a circular building was beyond the powers of East Coast architects."

Only two other circular buildings have been reported from the Maya area. One—at Mayapan—was destroyed by lightning in 1867. The other is the famous Caracol at Chichen Itza, which the researches of Dr. Oliver G. Ricketson have proved to have been an astronomical observatory—with lines of sight across its window jambs indicating compass points and important lunar positions.

The circular building at Paalmul is thirty-one feet eight inches high. It is shaped like four turrets of a battleship placed one above the other, the smallest at the top. I should have liked to excavate it, but the hostility of the Maya Indians made it unwise. Breaks in an altar at the back of the single room in the top of the building emitted cold drafts of air. E. H. Thompson has proved, in the case of the so-



Stone building at Ucul Ha, Cozumel Island, with peculiar stone cupola on roof.

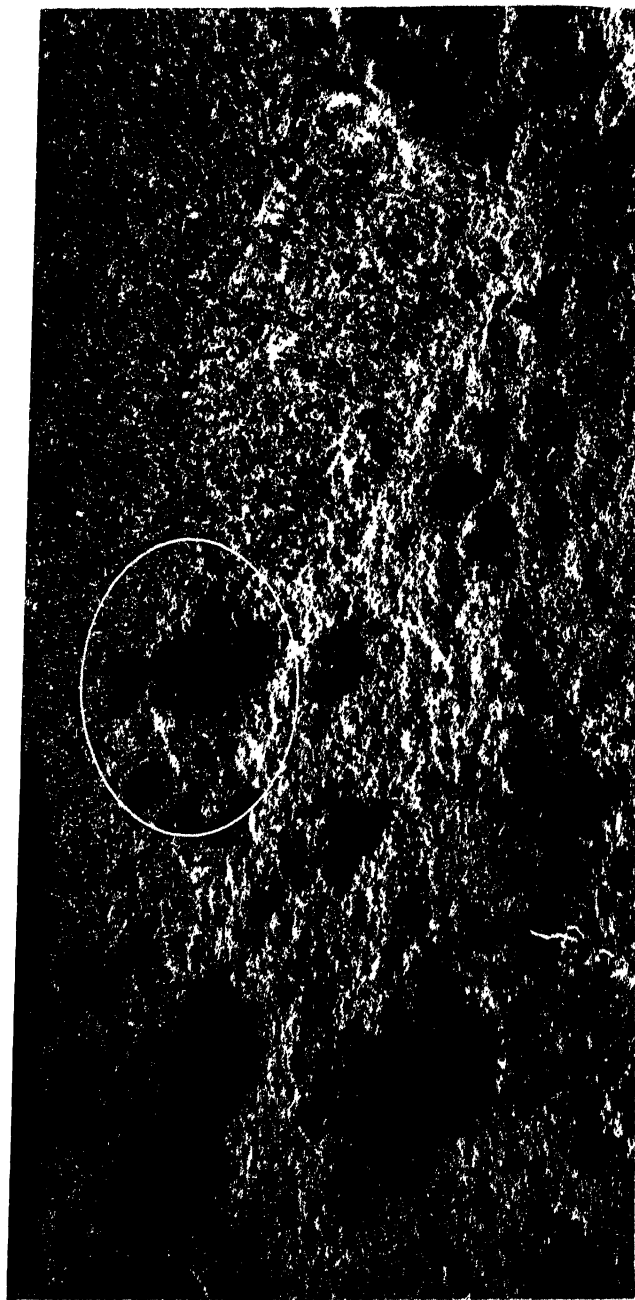


Tulum from the air.

(Fairchild Aerial Surveys Inc.)



Front view of round stone building at Paalmul, believed to have been an observatory.



(Fairchild Aerial Surveys Inc.)

This (*center*) is the round "astronomical observatory" at Paalmul as it looked from the air four years after we had cleared the trees and bushes from it.

called "Grave of the High Priest at Chichen Itza," that some Maya pyramidal buildings were used as tombs. However, it is probable that the chief use of the building at Paalmul was the worship of Kukulcan, god of the air. Kukulcan is said to have been the patron saint of the round building at Mayapan. He certainly was the patron saint of the entire city of Chichen Itza.

It will be possible, before long, to excavate the circular building at Paalmul. The Indians are probably dying out and are becoming less hostile, while the Mexican Government, which nominally controls them, is learning to understand the importance of archaeology. Whoever undertakes to learn the secret of this only known round building on the East Coast is to be envied.

12. Remains of low stone walls which may have been the division walls of farms were found at several points in the coastal strip, notably on Cozumel Island and on the mainland at the ruins of Xkaret (Little Bay). Private property in land, as we recognize it, was an institution frowned on by the Mayas and by most early American nations, but the Maya city governments did distribute among farmers (for use only) parcels containing 3.67 acres of land called *hun uinic* (one man), as described in Chapter Nine.

13. The East Coast of Yucatan already had been known for the presence of walled cities. The most famous among them is Tulum, which has been well advertised since Stephens described it in 1843. An expedition of the Carnegie Institution, led by Dr. Lothrop, found the walled city of Xelha, some twenty miles northeast of Tulum. About eleven miles northeast of Xelha, Spinden and I found the walled city of Xkaret.

Xkaret seems to be smaller than Xelha, to judge by Dr. Lothrop's description, but it has the charm of being a city

with great architectural unity. The eighteen buildings found there by us were of one type. They were small, well preserved, almost invariably possessed an interior altar, and were marked by exterior decorations in the form of birds and human faces made of molded stucco. The wall at Xelha cuts nearly across the peninsula to protect the city on the one landward side, thereby suggesting the wooden palisades at the bases of peninsulas which were built by the Indians of the northwest Pacific coast of America. The wall of Xkaret, however, is like the wall at Tulum in that it surrounds the city on three sides, leaving the fourth protected by the seacoast. Xkaret's wall is crescentic, whereas that at Tulum is right-angled.

A dangerous shift of the wind made it necessary for the schooner carrying my expedition to leave Xkaret, after only a couple of hours' work had been done. Up to the time that this is written it never has been revisited by archaeologists. An added inducement for a return to Xkaret was held out to us by our guide, who told us that there was a beautiful temple of the high pyramidal type a few miles inland from these ruins.

The walls protecting the three cities of Tulum, Xelha, and Xkaret on the East Coast of Yucatan are among the few evidences of fortification now to be found in the Maya area. However, the early chroniclers mention wooden palisades, and Dr. Lothrop has published the opinion that most of the large Maya cities were fortified.*

Six unknown features of Maya archaeology were established by my East Coast expeditions: (1) canals, (2) tandem pillars, (3) subterranean temples, (4) the most perfectly preserved building yet found, (5) use in roofs of crisscross timbers, covered with stone and cement, and (6) cupolas.

* Tulum, page 69; see bibliography.

1. The first river ever to be found in Yucatan had been reported by Dr. Thomas Gann. Spinden and I were first to explore it, and it led us to the discovery of the first known Maya canal. The river has its origin about twelve miles inland, in the larger of the two lakes of Muyil. It empties into a big lagoon a few miles north of Ascension Bay, which has an outlet on the sea at Boca de Paila (Cauldron's Mouth—and well-named). The canal, which connects the lakes, is about fifteen feet wide and a quarter of a mile long. It is unmistakably a canal, not a river. The banks of earth thrown up by the ancient Mayas in digging it are plain enough, although they are covered with reeds today.

2. Opposite the mouth of the canal, on the west bank of the inner lake, in the ruined city of Muyil, is a small temple containing the only known instance of Maya pillars arranged in tandem.

3. Muyil also has the first subterranean temple reported from the Maya area. It confirms ancient traditions that the Maya priests had their own secret places of worship. I discovered it after an incident that illustrates the dangers of the purely scientific point of view.

One of Muyil's most important buildings is a pyramidal temple, which the modern Indians call *El Centro* (The Center). On the morning of our second day at the old trading city, Spinden and I began to measure it. Bored with this tedious work, I called an Indian over to take my end of the tape, and I set out to explore the region for other buildings which I thought might have escaped our eyes in the thick bush.

As I stopped at the bottom of the stone stairs at the north of *El Centro*, I noticed a hole in the east flank of the masonry wall supporting the stairs. It was low and narrow, barely large enough for a man to enter on all fours. Inside,

it enlarged to a height of six feet and was, apparently, a well-made tunnel leading into the center of the big mound under El Centro.

I had no flashlight with me and the matches in my tobacco pouch were too soaked with perspiration to light. I crawled out and hailed Spinden.

"Say, have you got any matches? There's a tunnel here that goes right into the mound."

The big archaeologist finished entering the dimensions of a door in his notebook. He pushed his battered pith helmet back on his perspiring forehead and from his elevated position looked at me with withering scorn.

"Oh, you newspapermen! Always looking for Rider Haggard stuff!"

Blighted by his sarcasm, I wandered off into the bush. My self-esteem did not return until I discovered a small, stone shrine, with its inside walls bearing traces of the red paint the Mayas had made from the oxide of iron in the soil of Yucatan.

Privately, I determined that the tunnel should be explored before we left Muyil. But I saved the project until the day before we were to return to our schooner for a further cruise of exploration. Spinden had finished the measurement of the last Muyil building deemed to be worth studying in our limited time. As he stowed his notebook away in his iodine-stained knapsack, he said, "Now we'll go back to the schooner."

"No, we won't," I answered. "We're going to do a little 'Rider Haggard stuff.' " And I led him to the tunnel, having brought a flashlight in my fibre bag for that purpose.

When he saw us about to crawl through the entrance, one of the two Indians with us ran back to the camp in superstitious horror. The other squatted outside on his heels

in old Maya fashion, stubbornly refusing to follow us. There was a danger about the place that we learned weeks later, although the only obstacle we encountered just then was bats, which flew into our faces in their frantic efforts to get out of the old passage.

The tunnel led straight to a subterranean temple of three altars, directly beneath the surface temple, El Centro. I had wondered why the modern Indians applied this name to the upper structure Spinden had measured. A taller temple west of there, at the terminus of a stone road, seemed to me to be more worthy of the term "The Center." I believe now that a knowledge of the hidden house of ritual gave the site an important name among modern Indians. And I have no doubt that this was one of the Holy of Holies, reserved for the Maya priesthood. It was the most interesting thing we found at Muyil. We never should have found it if my natural curiosity had not overridden the typical caution of the overtrained scientist to avoid "Rider Haggard stuff." However, Spinden ordinarily gives more rein to his imagination than most archaeologists. That is one reason why he is better than most of them.

On the dry dirt floor before the center altar I found a piece of an old gourd. I started to stow it into my knapsack. Spinden objected so strenuously that I put it back on the floor. Several weeks later, he and I were crossing the entire width of Mexico's Indian Territory of Quintana Roo. This was the first time archaeologists had crossed it. At Santa Cruz de Bravo, capital of the Santa Cruz tribe of modern Mayas, we saw a good deal of their Chief, "General" Francisco May. We acquired his confidence to such an extent that he told us a group of his people had favored shooting us from ambush.

"I opposed them because I believed you really were our

friends," he said. "But the faction which wanted to kill you grew very strong in anger when you entered the underground temple at Muyil."

"But, my general, we took nothing out of the temple," Spinden protested.

"That was noted in your favor," declared the Maya Chief. "Had you taken that cup out, I doubt if I could have restrained the wrath of my warriors."

A shiver ran up my spine as I recalled how nearly Spinden had failed to persuade me to leave that gourd vessel on the floor of the temple. Had some Indian guardian of the holy place been watching us from a concealed chamber? Or was this a case of what ignorant white men call Indian magic—some power perhaps no more miraculous to red men than our ability to drive a "big steel eagle through the sky with white oil" is to us?

Speaking of magic lightly is one thing. Endorsing the superstition that there is a deadly curse about old temples and tombs is something else again. This supersitition was advanced in some of the yellow journals of this country after the sudden death of Ogden McClurg in the United States at the conclusion of the work of the expedition which discovered Muyil. The fact is that McClurg, who was our navigator and hydrographer, never put foot on shore during the whole cruise if he could help it. He never saw Muyil, or Chakalal—with its wall painting of Kukulcan. He helped us cut the bush off the round building at Paalmul which may have been an observatory. He did help clear a two-storied temple containing a terra cotta idol, also at Paalmul, and he did land at Xkaret to assist in cutting bush from the wall of the city. But of the entire group of five white men on that expedition, McClurg had less to do with temples and tombs than any of us, with the possible exception of Gris-

com, the ornithologist. The two men who entered every building that expedition found, Spinden and I, have managed to keep alive for a good number of years. If there was "a curse of the old Mayas," it has not been working very well.

4. The most perfectly preserved Maya building known is a small shrine at Ucul Ha on Cozumel Island. It is about six by six by six feet, outside measurements. The stucco on its outer surfaces bears hardly a nick, and is almost as white as if it had been laid on yesterday. The shrine has its own roof, almost touching the roof of a wide-mouthed limestone cave. In the darkness of the cave the building seems luminous. The protection of the cave is largely responsible for its good condition, but I believe that the shrine may have been constructed after the Conquest. It is known that, finding little to loot on Cozumel, the Spaniards left the inhabitants of the interior of the island pretty much to their own devices until the mainland had been subdued. As late as 1639 Sanchez de Aguilar reported much pure Maya ritual in practice. This shrine probably was dedicated to the all-important gods of rain or water. At the rear of it is a narrow natural well. The Indians of the native village still use the well, and we filled our canvas bags with its excellent drinking water.

5. An arrangement of crisscross timbers to hold up a stone and cement roof of two temples and three palaces near the north of Cozumel Island seems to be the only example of this on record in the Maya area. Common enough was the use of parallel beams of the hard sapote tree (the tree which gives the world chewing gum). But this crisscross pattern has not been found elsewhere. The main palace of this group has another unique feature: pillars bearing three-foot stone statuettes in relief, the left hand of each figure

on the hip and the right raised in the "stop" gesture of a traffic cop.

6. The building with a cupola—an entirely new feature of Maya architecture—is a pyramidal temple at Muyil. It is the same temple which has the faces of old gods carved in each corner, instead of being raised in relief in stucco. The dimensions of the cupola are about the same as a similar cupola I found later at Ucul Ha. I had gone about a mile southwest of a site called Santo Tomas, discovered by Dr. Spinden on our earlier expedition, when I came upon the remains of three buildings. The first was nothing more than a pile of stones; the second faced it, fifty yards away. It was a familiar East Coast type of small temple, crowning two terraces with a combined height of about six feet. One of my natives had lost my steel tape, so I was obliged to estimate measurements. The building contained a single room, ten feet long, six feet wide, and six feet high. It would have seemed ordinary had it not been topped by a perfectly round stone cupola four feet high and four feet in diameter.

The possible reason why East Coast architecture is so distinctive is suggested by my discovery of an ancient trade route. It had connected the Caribbean with the Gulf of Mexico by way of the Sarstoon and Pasión Rivers, with a small overland water carry between them. This overland carry made the East Coast culturally isolated from the rest of the Maya nation. This conclusion came about with the last discovery of the Mason-Blodgett Expedition: the city of Ollitas, mentioned earlier in this chapter for its acropolis.

I came upon the ruins of Ollitas (Little Jars) while I was studying villages of modern Indians on the Sarstoon River. The Mayas live mainly on the north, or British Honduras side, of the river; the Kekchis mainly on the south, or Guatemala, side. The headwaters of the Sarstoon River are

only about fifteen miles from the westward bend of the Pasión River. Indians in the village of Dolores at the head of the Sarstoon told me that not many years ago there was a trail from Dolores to the Pasión. Now, nobody needs it. Gasoline engines have come in. If you want to ship pigs or corn from Dolores to somewhere on the Gulf of Mexico, you ship down the Sarstoon and up around Cape Catoche, northeast extremity of the Peninsula of Yucatan. It was not always thus.

In the days of the old Mayas the trail from the vicinity of Dolores to the Pasión's tumbling brown rapids was heavily traveled. It was a link in a scheme to save the muscular strength that paddled cargo canoes around the Peninsula of Yucatan. Goods imported from South America could be paddled easily up the Sarstoon. Almost to the head of navigation that river has very little current. It was a restful matter for the sort of human porters who carried one hundred and fifty pounds in two days from Coba to Yaxuna to pack their cargoes ten or twelve miles overland to the Pasión. When they reached the Pasión, with the products that had come from the West Indies and South America by way of the Caribbean, the current carried them down the Usumacinta and then down to the Gulf of Mexico. All the canoe really needed was a man with a pole to steer.

Do not be misled by the word "canoe." In Central America a canoe often was a vessel longer than any of those of Columbus although, being made of the trunk of one tree, it was not so beamy. The Mayas had great trading canoes capable of holding seventy-two paddlers. Among the races rimming the Caribbean Bowl, they were the outstanding people for shipping. They, and the Caribs, were the only American people to use sails to any extent, according to early European writers and navigators. The Aztecs and

the Toltecs were mainly landsmen, but the Chiriqui of Panama had their flotillas of commercial ships. The Taironas were notorious pirates, as well as sea traders who could bargain with the best of them. The ships of the aborigines were a very shoal draft, since they were mainly large dugout canoes. In this respect they were better craft for the Caribbean than our modern ships are. Their navigators had little fear that they would strike one of the coral reefs which are an ever-present menace to the navigation of iron ships. The early Americans had no device to enable a boat to sail to windward. They had no keel, centerboard, or leeboard. When the wind was not favorable, they had to paddle against it. Or, they burned incense to wind gods like Hura-kan, from whom we get our word "hurricane."

The Sarstoon River, inside the bar, afforded good anchorage for even the longest of trading canoes, laden with the pearls and emeralds of Colombia. Today there is a sinister air about this lower part of the river. One thinks of a great stream flowing out of darkest Africa. White herons supply a touch of beauty; but their presence accentuates the dismal tone lent by crocodiles and by thick, ugly snakes coiled about the lower branches of trees, behind draperies of vines which trail into the water from the upper limbs. This part of the Sarstoon once was to ancient Ollitas what the lower bay around Quarantine is to New York.

Thatch-roofed ship sheds were built off the low banks into the river to protect idle canoes from the wind and the rain. Most of the transshipping of cargo to the small river boats was done near where Dulce Creek empties into the Sarstoon, half a mile behind the protective bar. The harbor is unusually calm in the morning. At noon, when the gentle land breeze dies down and the turbulent sea breeze is borne in from the Gulf of Honduras, it becomes a turmoil of

white and green water. Arriving cargoes had to be timed to reach the bar before noon lest they be forced to lie off shore all night, as many a modern liner has to lie at Quarantine within sight of Manhattan's towers.

There is high, dry land just west of the junction of the creek and the river. Here, probably, were located most of the inns and the grogshops for sailors. The skippers, with the passengers of social importance, went up the creek two miles to where the stone foundations of the ceremonial center of the city occupy some twenty-three acres.

The "acropolis," which appears to have been the center of Ollitas, occupies a magnificent position on high ground. It overlooks the sea to the east and the twelve-hundred-foot Sarstoon Bluff to the southwest. Its afternoon shadow falls over the tumbled white stone of temples which once boomed with the priests' evening prayers.

Two large mounds form this "acropolis." One of them is mainly carved out of a natural hill. The other and more interesting one, just east of it, is obviously artificial. It is a hundred and sixty paces long and thirty paces wide, running about north and south. It has nine mounds on it. Apparently, they once were foundations of buildings, for they are covered with cut limestone. Four of them are in a quadrilateral "palace" formation at the southern end of the long supporting structure. The other five, each about twenty feet long, twelve feet broad, and six feet high, and flat-topped, are in a roughly oval arrangement at the northern end of the long main mound. I believe this was the ceremonial center of Ollitas and that excavation here would be a fascinating and profitable task. The men of God at Ollitas were also men of science. They worked out the knowledge of heavenly bodies which made it possible for Maya canoes to navigate northward to Chakalal, Muyil, Tancah (the port

of Tulum), Cozumel, Havana, Campeche, and Vera Cruz. The mariners going southward sought good harbors, pretty certainly as far distant as the eastern shore of Colombia and perhaps to the region of modern Rio de Janeiro. There was no silly conflict between religion and science then. The priests collaborated with the engineers who built such canals as the one we found, forming part of the twelve-mile waterway approach to Muyil in modern Quintana Roo. The priests supervised the worship of maritime deities on the altars of the coastal "lighthouse" temples. The stone buildings at high points along the East Coast of Yucatan served both as beacons and as shrines for fishermen and sea traders.

Chapter Seven

SAN FELIPE MOUNDS AND RIO FRIO CAVES

PROCEEDING OVERLAND FROM the East Coast of Yucatan, my explorations next centered in British Honduras. Many indications of ancient Maya occupation were discovered south of the town of Cayo and close to the Guatemalan border. There can be no doubt that this area was once thickly inhabited. That is not surprising. The adjoining Peten District of Guatemala is liberally sprinkled with Maya ruins. The explorer who visits it without the excellent archaeological index recently made by Tulane University is likely to find himself "discovering" ruined cities which already have been discovered by previous visitors with scientific interests. Peten has been a Mecca for students of the Mayas. British Honduras, on the other hand, has been neglected. Many archaeologists have been inclined to regard it as a "peripheral area"—a zone into which tribes of lesser culture were pushed by pressure of those of higher civilization. Not enough work has been done in British Honduras to upset this opinion entirely. Yet the evidences of ancient man's handiwork which have

been found are sufficient to establish the culture once flourishing there as one of no mean order.

The friendliness of the chicleros led me to the sites which my expedition investigated in the Cayo District. Explorers rarely stumble upon a ruined city; they are directed there. It is usually impossible, in the bush, to see even a large monastery more than a few feet off the trail. If, at great labor, you hacked your narrow way through the jungle for ten or twenty or thirty miles over a compass route, the chances are that you would find nothing very exciting to scientific curiosity. The British geologist Ower hewed a compass route for sixty miles through the bush of British Honduras a number of years ago. Ruins already were known in the better explored areas at each end of his trail, but he did not find a single monument en route. An exception to prove the rule was the happy chance which brought Dr. Sylvanus Morley into the ruins of Uaxactun (pronounced *Wahshahctoon*) in 1918, when he had lost his way and was trying to find a trail back to the main body of his expedition.

Chicle "bleeders" and mahogany cutters are always opening new trails in search of the trees they covet. It is inevitable that they often come upon interesting ruins. Dr. Herbert J. Spinden once remarked that "American archaeology is founded on chewing gum." Clues which we got from chicleros led Dr. Spinden and me to six of the seven ruined cities discovered by our expedition in 1926. My discovery of the Tairona city of Tairo in 1936 was due to a tip from Mr. James Hawkins, a local planter.

Mr. J. Eric Thompson is deservedly given credit for being the first scientist to study a highly important group of ruins in southern British Honduras. The ruins were named Puselhau by Mr. Thompson, although Dr. Thomas Gann un-

justifiably attempted to rename them Xumacha. The actual discoverer of this city was Mr. Archibald Mason, whose mahogany tractor's progress through the bush was stopped when the machine bumped into a fallen stela.

The Maya fever is very contagious. Many white residents of Central America exhibit its ravages in the form of a violent partisanship for this or that explorer. I discovered the site of Ucul Ha (Drinking Water) on Cozumel Island, thanks to the favoritism which one of the chicle agents of Mr. Thomas H. Blodgett and Mr. Bartlett Arkell happened to entertain for me. When other explorers were in that neighborhood, the agent, Mr. Moisey Adams, deliberately withheld his knowledge of the location to which he led me. He was "saving" the "discovery" of the shrine of ancient pilgrims for me, and he saved it until I arrived. Similar information has been saved for explorers representing the Carnegie Institution by Mr. P. W. Shufeldt of Belize, and for the Field Museum of Chicago by agents of the Mengel Lumber Company. He is an unfortunate explorer who cannot count upon the aid of at least one or two local angels.

Human nature being what it is, explorers themselves tend to develop favoritisms and cliques. A former agent of a large European museum, who cannot follow up his clue himself, recently gave me a hint as to the location of a walled city. Mr. Frans Blom of Tulane University was prevented by sickness in his party from visiting a cluster of temples and shrines which he had heard about. He transferred his information concerning its probable whereabouts to my notebook.

Sometimes information leading to the discovery of ruins is not given away but sold. Dr. Morley used to have a standing advertisement in the chicle camps: "*Veinte cinco pesos para una ciudad real* (twenty-five pesos for a royal

city)." More than once he paid the reward and found it a good investment. A few years ago I paid a peso (fifty cents) apiece for temples which a chiclero named Agapito Katzim showed me on the East Coast of Yucatan. The site of eighteen temples was the one which we named Xkaret (pronounced *Shkaret* and meaning "Little Harbor"). Katzim said that more ruins lay behind the thick screen of the bush at the walled city of Xkaret. We did not investigate them because, as I related in the last chapter, a sudden shift in the wind forced us to beat a retreat to our schooner and weigh anchor. Katzim is dead; but anyone going to Xkaret, near Cozumel Island, might find his successor or his son and discover more temples for fifty cents a temple.

The first site to which our expedition was directed in British Honduras was a group of burial mounds. They are on a hacienda called San Felipe, two and a half miles south of El Cayo on the west bank of the Belize River.

Excavation is known as "dirt archaeology" because it is accomplished by wielding a pick and shovel. It is quite as fascinating as its twin, "bush archaeology," because when you are excavating, just as when you are exploring, you never know what you may find. Digging is particularly exciting if you are unearthing a Maya mound, for they were not all built for burial purposes. Some were constructed for defense; others were made to be the foundations of buildings which have decayed. Mounds sometimes were erected over vacated temples and other stone structures because, for inscrutable reasons of their own, the illustrious early Americans wanted the buildings to be hidden.

The seven mounds at San Felipe are on a large farm owned by Mr. H. R. Lisby, a gentleman of African lineage and considerable importance in El Cayo. He owns a grocery store in El Cayo, a freight and passenger launch plying

between Cayo and Belize, and other property in addition to his plantation. We made El Cayo our headquarters and "commuted" to San Felipe during the three weeks we were working on the mounds. Mr. Lisby gave us permission to excavate and rented us picks, shovels, and a dugout canoe for our "commuting."

The mounds are on high, well-drained, fertile soil—an admirable site for an aboriginal village. The first two which we sampled with our picks seemed especially promising. We found a burial in each of them, with attendant jade and shell ornaments and unusual structural features.

Our time was too limited for us to make a complete examination of all seven mounds, but our investigation of Mound Number 5 and Mound Number 6 rewarded our efforts richly. The grave we found in Mound Number 6 was only four inches below the surface of the top of the mound. Like that of Number 5, the top of Mound Number 6 was in the form of a truncated cone eleven feet high. Its diameter at the top was twenty-two feet. The grave was made of limestone slabs. Measured from the outside, it was seven feet long, three feet wide at one end and two feet wide at the other. It contained only scant remains of bones. I believe the remains were those of a man who, at the time of his death, was *cacique* or high priest of the settlement of Indians * at San Felipe.

Inside the grave of the ruling priest I found the fragments of a very nicely made pottery *incensario*, which lacked the painted decorations found on pieces of pottery which had been sprinkled over the grave in Mound Number 5. It was the Maya practice to make a certain type of sacred

* The Indians surely were Mayas and were probably one of the six tribes in the region who were reported by the first Spaniards as being at war with the famous Itzas of Lake Peten in what is now the Peten District of Guatemala.

incensario for this use alone—to be broken into pieces which were scattered through a burial mound. The grave also yielded two shell earplugs, two inches in diameter, with scalloped edges and perforation in the center. Another notable item I found in this grave was an ornamental jade cylinder, three inches long and a third of an inch in diameter, the exterior decorated with incised lines. It was probably worn as a necklace, but to modern eyes it looks like a cigaret holder, for which it would be excellent.

Mound Number 6 is made entirely of clay and sand, an extraordinary piece of construction for the Mayas, who were accustomed to make their mounds either of limestone blocks, limestone rubble, or of such a mixture of earth and stones as one would find by digging at random for building materials. The builders of Mound Number 6 either took pains to sift out all stones from their material or else went some distance to find a deposit of pure clay and another of pure sand. Whichever procedure they followed, they obviously held this mound in peculiar regard. We dug to a depth of two or three feet below ground level without finding anything beneath the grave in the top of the cone of earth.

Mound Number 5 is notable for containing two buried cement floors. The first is twenty-seven inches below the surface of the mound and is covered by a layer of rubble and limestone mortar. Twenty-nine inches below the first floor there is a second one, similarly covered by rubble and mortar. The first grave we found is twenty-eight inches below the second floor. The intervening material, again a heavy rubble, was difficult to remove with our picks and shovels.

Why were these floors covered? The first one may have been worn out, or the users of the mound may have decided

that they wanted a more elevated view. Why did they take the pains to cover the second floor with rubble? There is no doubt that a building once stood above that floor, for we found large squared blocks of limestone throughout the uppermost layers of rubble. I believe the Mayas deliberately destroyed this building and covered its remains, including the floor, so that what was to them a sacred place should not be profaned by the outlanders who were invading their country.

There is reason to believe that in what is now the interior and the western frontier of British Honduras small groups of Mayas maintained their old civilization for some time after the Spaniards had conquered the coast and the highlands of Mexico and Guatemala. These "last stands" of Mayas had time to observe the scant respect with which the barbarians from Europe treated the artistic products of American culture. Doubtless, at other settlements than San Felipe, they destroyed and buried their temples rather than let them fall intact into the hands of the freebooters who were plundering the "New World."

In Mound Number 5, at depths of from four to eight feet from the top, we found pieces of painted pots, but they were too small to make much of. We were digging beside the first grave in the mound before we came upon potsherds large enough to give us an inkling as to the nature of the design on the original vessel. (The limestone slabs on the top of the grave were eight feet two inches below the flat surface of the mound.) The pots had been made of a thin yellow material which had been given a high polish by rubbing. The designs had been outlined in black and filled in with red, although on two or three pieces the black outline had been omitted. The artist had made much use of geometric design. Other designs were a creature with long legs,

probably a bird, and what looked like a conventionalized feathered serpent representing the powerful Maya god Kukulcan, who was associated with rain, and hence with maize.

This Maya polychrome pottery is supposed to have been the product of that artistic efflorescence which occurred between 250 A.D. and 650 A.D. The era often has been called the Period of the First Empire as distinguished from the Period of the League of Mayapan, supposedly a later and more northerly efflorescence. A distinguished group of younger archaeologists has repeatedly challenged this division of Maya history. In the light of recent discoveries, older scientists are becoming less dogmatic in upholding it. Whether there ever was a "First Empire" or not, there seems no doubt that there was a notably high artistic level attained by the early Americans in Central America between the dates just mentioned, and the settlement at San Felipe seems to have started at least as far back as the latter part of that epoch.

Five feet to the west of the first grave and on the same level, we found another grave in Mound Number 5. It contained the remains of two skulls, which crumbled when we tried to remove them from the hard, dry earth in which they were embedded. The outside measurements of both graves were seven feet long by two and a half feet wide by two feet deep. Both were made of smooth limestone slabs. The body in the first apparently had been laid in the prone position. The two bodies in the second had been doubled up, knees drawn up to chests, to judge by the proximity of thigh bones to skulls. The latter was the common position in which corpses were laid out by Maya undertakers. The use of it made possible the disposition of two bodies in one grave, if they were placed head to foot and not side by side. In these three burials, as in the burial found in Mound

Number 6, the graves ran from north to south and the heads of the dead had been laid toward the south.

Except for a few pieces of pots—both painted and unpainted—nothing but bones were found in the second grave of Mound Number 5. The first grave was evidently that of a person of greater importance than either of the two persons who had been buried together in the second grave. This conclusion is partially based on the fact that he had been given a grave to himself. Furthermore, objects had been placed beside the body within the stone enclosure, which indicated either some wealth on the part of the deceased or some ceremonial significance. There were three or four dozen hard clay pellets not much larger than large bird shot, two obsidian knives, and fragments of what seems to have been a small mirror of pyrites.

Pyrite mirrors have been found in a grave in Kixpék, Guatemala, and have been described by Dr. J. Alden Mason of the Museum of the University of Pennsylvania. None of the fragments we found were larger than a fair-sized thumbnail; yet after we had rubbed off the adhesive clay we could recognize our own features very easily in the reflection afforded by these small pieces.

The ornaments indicate that the body buried alone in the first grave of Mound Number 5 was that of a high priest. It is certain that he was not exactly contemporaneous with the other ruler whose bones we found in Mound Number 6. The two skulls in the other grave in Mound Number 5 were those of the ruler's two wives.

When we had finished with the San Felipe mounds, we turned our attention to caves. One of our two mule drivers guided us to a cave he had found a year before while cruising the bush for sapodilla trees. It was an impressive big

cave of the wide-mouthed variety. The entrance must be about a hundred feet wide and seventy-five feet high.

We had not been three minutes in the natural inner chambers of the cavern before we had found a number of potsherds and a complete pot five and three-quarters inches both in height and in diameter. It was made of rather thick, painted ware and was pleasing in form, with the remains of a black design faintly visible on its tan sides. Like many of the art objects found recently in British Honduras, this pot is something of a puzzle to one accustomed to the conventional and—frankly—better ware which is characteristic of Maya culture at its height.

No more intact pieces were found, but there were enough sherds to indicate that the cave was inhabited for a considerable period, and probably until quite recently. It would make an excellent home for three or four hundred Indians. The wide mouth let in enough of the slanting rays of the afternoon sun to prevent that unhealthy dampness which usually permeates caves in this country. Before we left I found two sherds decorated with bands of the same design. It looked very much like a glyph, although untranslatable now. Probably it was a decoration put on with a stamp, in the way modern potters might stamp some trite motto on their ware: "God Bless Our Home," or "God Bless Our Cave."

The marks left by men who had formerly used the land outside the cave were of more interest to me than the cave itself. There were any number of stone walls which had served as the front supports for agricultural terraces, and there were the remains of two roads, limestone founded. The early Americans terraced hillsides for agriculture very much as modern farmers do in France and in Japan. The vicinity of the cave is hilly. The hills are small, and terraced

everywhere. Many of the walls were in excellent condition. It seems probable to me that this is one of the regions where the Mayas, or some of their close cousins, held out until some time after the Conquest. Excavation in such an area should be extremely profitable.

Explorers have a tradition that they must apply a Maya name to any new group of ruins. When a cluster of ruins is known already to the natives by a Spanish or an English name, the bestowal of a Maya name seems to me to be an unnecessary complication—a complication which will make finding the place difficult for the next man with historic or scientific interests who comes along. This cave and the region around it had no name. I called the site Chikin Ac Tun, which means “Western Under Ground” or “Western Cave.” The cave is near the western border of British Honduras and some distance west of the Rio Frio caves toward which we set out after leaving Chikin Ac Tun.

I had purchased information in order to locate the Rio Frio caves. An outline of the transaction would serve as the plot for a story of adventure. Through the kindness of Mr. John Ross, of El Cayo, I heard of an old chiclero who was said to know the location of a cave filled with marvelous pottery. The chiclero proved to be a very taciturn man of Negro and English blood, named Alfred August. When he had been hunting deer in the pine ridge country south of Cayo about thirty years before, he had come upon an aged Indian who had just been bitten by a poisonous snake of a kind known locally as “tommy-goff (fer-de-lance).” August is what bushmen call a “snake doctor.” He applied his bush remedies and the old Indian recovered. In gratitude, the patient offered to show August a wonderful cave in the mahogany forest which adjoins this piece of pine ridge on the west. August returned for a rendezvous when the Indian

had regained his strength. They went together to a cave "which opens through a slit in the side of a hill and has many, many rooms, filled with pots—pots everywhere," August told me.

His tale sounded convincing. He declared that he had told no one else of the cave until he recently mentioned it to Mr. Ross. He was such a taciturn old man that I believed him. He never had revisited the cave but thought that he could find it, for a consideration. We bargained for a while over Scotch-and-ginger in a back room of Cayo's flea-infested hotel. August agreed to go out and look for the cave. If he was successful in finding it, he would take me to it for forty dollars. The next morning he rode away on his mule. Three days later he returned, with the curt statement: "Found her."

The cave turned out to be all that he had promised. While we were encamped there we found two other caves in the near-by bush. We called them Cave A, Cave B, and Cave C, in the order in which we visited them. The three caves are close together in a dense mahogany forest near an abandoned mahogany cutters' camp called "Schultz's Camp," on the banks of a creek known as the Rio Frio.

Two of the Rio Frio caves—Cave A and Cave C—afforded voluminous treasure. Cave B is the smallest and least interesting. There are two good reasons why it was less used for human occupancy than the other two. First, it lacks a water supply of its own. Second, it is of the wide-mouthed type with few pockets or tunnels inside and would, therefore, be more difficult to defend than the other two. We found a few common potsherds in Cave B, but no other artifacts. It did, however, yield a wide variety of bats, including a species which Oliver L. Austin, Jr., told me was

new, as he skinned it for Harvard's Museum of Comparative Zoology.

Cave A and Cave C are utterly unlike each other, but both merit rank among the physical wonders of the earth. The first one sees of Cave A is a wide slit near the top of the western slope of a sizable hill. The gash in the hillside is about ten feet high and forty feet wide, with a bare limestone lip showing above. An extensive division is at the right with several subdivisions or chambers, but the entrance to the main cave is at the left and steeply downward. Most of this entrance had been walled with big stones by the ancient inhabitants. The wall served both as defense against enemies and as protection from loose boulders which might roll into the cave.

The first impression one gets of the cavern is that it is hung with heavy white draperies, deeply folded. The "hangings" are limestone. The cavern is deep and has so many natural passages and chambers at each side that one is bewildered by the possibilities for exploration and alarmed by the possibilities for getting lost. The first time I went in we fastened one end of a ball of string at the entrance and unrolled the ball as we went along. When we came to the end of the string, we stationed candle beacons at intervals of thirty or forty feet.

About two hundred feet northeast of the entrance and sixty feet below it, one comes to what I have called the "cathedral." It is a great round chamber under a high dome of limestone. At different levels—like second and third stories—other apartments of the cave open on one side of the cathedral. A massive limestone pillar, about twenty feet high and five feet by four in cross section, reaches up from the floor of the third story to the roof. It seems at first to be the work of man, and I examined it several times before

coming to the conclusion that it is not. Its artificial appearance is increased by the fact that, low down on the side which looks out over the great main chamber of the cathedral, there is an opening like a mouth with what appears to be lower and upper teeth, four or five inches long. At first I thought it was the open jaws of a stone simulacrum of the sacred serpent, such as may be seen at Chichen Itza and other Maya cities. I am convinced now that the teeth are merely small stalactites and stalagmites. However, there were traces of copal incense ashes at the bottom of the "mouth" to show that if man did not make it for ceremonial purposes, he used it for that purpose—and not very long ago, either.

The old Indian who showed the cave to Alfred August escorted him there about 1908. He told August that Indians of the tribe that had inhabited the cave were living, at that time, only about thirty miles away in the Peten District of Guatemala.

From the main chamber of the cathedral we reach the upper stories through a burrow barely large enough to enable a man to crawl thirty feet on his hands and knees up a steep grade. Emerging into a large chamber, we climb its perpendicular eight-foot wall with the help of projecting knobs of limestone. The base of the plateau of limestone must be circled to reach the top, from where that extraordinary pillar reaches to the roof. Another hundred feet on, over some very bad footing, is the edge of a precipice above a hidden creek. There are slimy boulders to climb over and, worse yet, a forty-foot expanse of slippery rock sloping steeply to where it ends with a drop of thirty feet to sharp stalagmites. The precipice includes an almost sheer drop of thirty feet at the south. At the north it is only an exceedingly steep and slippery hill, ending in an easier slope

to the creek perhaps eighty feet below and one hundred and fifty feet west. We could not see the water, but, when we threw down stones, a series of clicks as they bounced off rocks always ended with a faint splash.

One end of our light rope was made fast around a big boulder at the top of the incline. A small but fearless Nicaraguan laborer named Chinda took the other end in his left hand and went down. We tried to augment the illumination from his flashlight by throwing the rays from our own *focos* ahead of him. When he hooted, to signal that he had reached the water, my foreman followed. While an old Negro called "Mistah Brooks" remained to watch the fastened end of the rope, I began to descend. I advanced in a sort of crouch, except when forced to stand up where the rope led over a high boulder.

The creek is only three or four feet wide at the foot of this incline, which is at the middle of the stream's visible course through the cavern. The stream wells up out of the rock at the south and flows about two hundred feet before disappearing under the rock at the north. Its water is the most limpid imaginable—sweet and cool.

We found a shallow saucer of rough sandy ware grown into the limestone in the bed of the creek. It was the only artifact we discovered along the creek, although we found a few intact pots and a number of broken ones of several varieties throughout the rest of the cave. I believe that it was here that Alfred August saw "dozens of pots, each with a little hole in the bottom," thirty years ago. I believe that this particular cache of pots has been stolen, very likely by Indians, since August saw it; and that August, like many another guide under similar circumstances, is seeking refuge in a lie when he says that he cannot find the same approach to the creek which he used before.

Having explored the little river, I sent Chinda and Smith, my smallest laborers, into two tunnels too narrow for me to enter. These tunnels seem to be natural fissures through the limestone, but some of them are so regular in shape that it is easy to believe that man had a hand in making them.

The first of the tunnels ended in a chamber in which only broken pieces of common pottery were found, but the other brought us better luck. It started with a perpendicular drop of five feet, then turned horizontally into a wide, shallow chamber containing many fragments of large water jars and corn jars. Beyond this chamber the tunnel became too small for me to enter, so I waited at the mouth of the perpendicular shaft while Smith and Chinda went on.

They had been gone half an hour when I heard their voices directly over me and saw their lights through a hole in the stone ceiling. As the hole was too small for them to squeeze through, even if we had had a ladder, they were forced to spend another half hour returning the way they had gone. They reported having found a maze of tunnels and chambers, and having sighted several water jars intact, besides the pieces of better stuff which they brought with them. Four of the pieces were found to fit together, making a very nice wide, shallow plate, with a geometric design painted on in orange and black and with red flowers in the center. They also brought out a large piece of a vase with a design in red, orange, and black, including what may be glyphs. Experts consider it not unlikely that there were other written languages in Central America besides the Maya, or that there were variations of the Maya glyphs so different from the conventional style as to be unrecognizable at first.

The first time August guided me into the cave, he found

an orange vase encircled by a band of red glyphs. Mistah Brooks, exploring a chamber which the rest of us had overlooked, found two other vases of this character, but with more decoration than the one August found. Each of them contained ashes, but before I could save the ashes for later analysis, one of the men spilled them into the river.

These three vases are of a very valuable variety. The first is cylindrical, seven and a half inches high, and six inches in diameter. It is made of a thin red ware, with a yellow band one and three-fourths inches wide around the outside of the top. In this band is a row of red hieroglyphs or designs—it is hard to say which, though it is not any known glyph—which encircle the vessel. They are repetitions of the same sign, which looks something like the symbol for fire ceremony.

One of the other vases is five and seven-eighths inches high and five and a half inches in diameter. The color is orange. Below a black line, a black glyph, or design, repeated seventeen times, encircles the top of the vase. Below that, in four black circles of three inch diameter, are four red glyphs, or designs, which seem to have the serpent motif.

The third vase was my first choice when I divided the collection with Captain Gruning of the British Museum, in accordance with Colonial law which allowed me to keep only half of my collection for the Museum of the American Indian, Heye Foundation. It is six inches high, and five and one-fourth inches in diameter, of orange-yellow ware three-sixteenths of an inch thick. At the top, between black borders, sixteen red glyphs encircle the vase, no glyph being repeated. The background on which they lie is a clear yellow, a lighter tint than that of the body of the vase. Encircling the middle of the vessel are six ovals of red, and below them three one-eighth-inch black bands and a one-

fourteenth-inch red band, all somewhat unsteadily drawn.

Nearly everywhere in Cave A, we encountered necks and other pieces of *ollas* which probably had been used to hold water and grain. They varied from eight to eighteen inches in height, their diameter usually nearly equaling their height, and in a few cases exceeding it. They were of a thick, coarse dark-grayish ware, unpainted, but often bearing encircling punctate designs below the neck. In many cases the designs were wavy. Some bore eyelets under the neck, to facilitate carrying with a cord. There seemed to be no standardized type of lip or neck. One olla had a neck with an outside diameter across the lips of only five and seven-sixteenths inches, while another had a diameter of seventeen and three-sixteenths inches. None of the ollas had legs, but some of them had circular bases.

I do not believe this cave was used as a tomb. There was not enough earth to make burials sanitary for the living who occupied the cave, and the quantities of pots and potsherds indicate that it housed a large population for hundreds of years. The only feature which suggested a grave, within the cave, was a small terrace of earth and rock near the opening. We took this terrace apart and found only a few pieces of rough pottery. I believe the terrace was made originally to reduce erosion.

Cave A was an ideal home for primitive man, as well as for his more cultivated descendants who made the pottery. The age, both of the cave and the pottery, is difficult to fix, but I believe the cave was used by some pre-Maya people. The hills are Tertiary limestone, much older than the Quaternary limestone of Yucatan.

Cave C is just as remarkable as Cave A but is entirely dissimilar in form. Cave C opens wide and high at each end and is illuminated to some extent by daylight throughout

the nearly four-hundred-yard length of the main cavern. It looks more like a high, covered canyon than like the usual Central American cave. Its lofty sides contain some pockets and branch caverns, but they do not compare in number or extent of floor space with the labyrinthine subdivisions of Cave A. That cavern impresses you by its mystery; Cave C, by its scenic beauty and by an air of well-proportioned spaciousness suggesting a huge Gothic cathedral.

We discovered Cave C coming up the bank of the little Rio Frio from the south-southwest. A long sandbar stretched ahead of us to the foot of a little waterfall which was at the bottom of a great stone mouth in the base of a steep hill. The mouth was a hundred and fifty feet wide and equally high, its upper lip barely brushed by a tall tree growing in a steep bank just outside the cave. The whole edge of this horseshoe-shaped mouth was bare, grayish limestone.

From the southwest entrance, the cave runs about twenty degrees east of north. In the middle, the great natural tunnel swings about sixty degrees more easterly. We went in on the southeast side of the river, on the right bank going upstream. The ground rises sharply from the river and the cave widens to about two hundred and fifty feet just inside this entrance, leaving considerable space, which humans might occupy, on each side above high water mark. This space is wider on the southeast side than on the opposite bank, and it was on the southeast bank that we discovered most of the artifacts and other evidences of man's occupation.

Almost at the very entrance to the cave is a big boulder. There is just room for a man to pass between it and the wall of the cave in order to reach a hole which is waist-high. I was not able to enter until I broke off some sharp

four-inch stalactites, which threatened to rake the back of anyone who might crawl the nine and a half feet that the passage runs. It opens into a cavity about thirty feet long and from five to ten feet wide, but only about four and a half feet high. The opening was too small for any of us except the diminutive Chinda, named the Human Ferret by the other men. He promptly wormed through it, scratched about with his machete on the dirt floor of the interior for a minute, and then passed out a beautiful jade earplug. It was carved from one piece of stone but looks as if it were made of two hollow disks of jade, connected by a collar half an inch long. The entire piece is a hollow disk half an inch high, two and a half inches in diameter at the top and one and one-fourth inches in diameter at the bottom. Later, Chinda found another and smaller jade earplug in this same place, at a depth of from four inches to a foot in the loose earth. He also found a pendant of jadeite, probably worn on the chest, and six dishes, mostly alike in shape, varying in height from one and a half to two and a half inches, with a top diameter of from four inches to seven and one-fourth inches, and a bottom diameter of from three inches to four and a half inches. In three of them, the bottoms were roughly rounded.

Chinda found fragments of human bones, and I have no doubt the place had been used as a tomb. The Mayas were a small people. Many of their modern descendants are as small as Chinda, who is five feet two inches tall and weighs a hundred and ten pounds.

A few feet further in the cave was a structure which seemed to be an altar. It was thirty feet long, nine feet wide, and four feet high, built out from the perpendicular wall of the cave, and constructed of loose stones without mortar. The stones ranged from four inches to two feet in



(Museum of the American Indian, Heye Foundation, N. Y. C.)

(top) Stone buttons and pendants and beads from beneath an altar, cave C, Rio Frio.

(bottom) The three vases of polychrome ware bear designs which may be glyphs, although it is not the known orthodox type of Maya writing. All three came from the Rio Frio caves and were probably funerary urns.



(Museum of the American Indian, Heye Foundation, N. Y. C.

(top) Two jadeite ear plugs from a tomb in cave C of the Rio Frio group.

(bottom) Left, piece of terra-cotta incense burner from cave B, Rio Frio, and, right, polychrome plate from cave A, Rio Frio.

diameter. The small stones were at the top of the altar, and the large ones at the bottom. The altar ended against a great boulder which hung out of the side of the cave, leaving a space about seven feet wide and ten feet long, with two or three feet of head clearance beneath it. Three feet from the southern end of the altar there was a round hole in the floor of the cave. When I dropped into this man-hole, I found a little tunnel winding through the altar to the space under the boulder. On top of the altar we found one shallow saucer of rough ware. Before the altar there were many fragments of pottery, including pieces of two incense burners studded all over with nipple-like projections one and one-fourth to one and seven-eighths inches long, and a ball of limestone two and one-fourth inches in diameter—the latter probably a slingstone.

Later, we took the altar apart. Under its junction with the big rock we found four jade beads, many small, broken pieces of jade, and a jadeite button. At least, the last object was much like a button on one side, with a depression in the middle; but the opposite side is pierced from the flat surface to the rim by two small holes, suggesting a Japanese *netsuki*. There were many ashes under the boulder at the edge of the altar, very likely the remains of ancient ceremonial fires. And under the boulder, in the loose sand, I found another small dish, like the ones Chinda had found in the tomb.

Before the job of taking down the altar was begun, we made an exploration of the whole cave, with special attention to the cavities high up its perpendicular sides. Smith and Chinda reached one of them, thirty feet above the floor, and ten or fifteen yards north of the boulder. In a small chamber, which would have been an excellent hiding place in time of war, they found half a dozen small saucers

of plain sandy ware, two inches high and three and three-fourths inches in diameter.

On the southeast side of Cave C, the ledge on which the altar was built continues, with some breadth, half the length of the covered canyon, ending in a wide platform of flat rock. The natural supposition that this cave would have been much used by the ancient inhabitants was confirmed by the presence of many potsherds in the thin layer of dirt over the stone. Ordinary walking was impossible any further along the wall, but Chinda went up the perpendicular side like a fly, creeping from crevice to crevice and probing every crevice with his flashlight. In several of them he found pottery remains, betokening an early human existence here that suggests the cliff dwellers of our own Southwest.

On the opposite side of the river, the largest space suitable for human occupation is toward the northeast entrance of the cave. We crossed the river, over slippery stones, and ascended terraces of hard-packed sand suggesting the bad lands of Arizona. Above were terraces of creamy limestone, covered with fine earth, which the prevailing easterly wind was sifting into the cave at this very moment. A human aversion to this mild, but more or less continuous, sand-storm may have been one reason why the southwest end of Cave C had been used more than the northeast. Several feet of drifted dust would have to be removed before one could expect to find sherds on the main terraces at this side of the river. Smith went up the steep side of the cave, opposite where Chinda was playing the human fly, and found sherds in another pocket, this one almost under the lofty roof.

There were several pockets which even the agile Chinda was unable to reach. One should not conclude from this,

though, that they were never used by early man. They could have been reached with crude ladders, and they offer such an obvious retreat in the event of the capture of the main cave by an enemy that it is quite possible they will be found to contain traces of human occupation.

In order to get as much work as possible out of my men, I instituted a system of bonuses for everything valuable which they found. The chance at extra money made the men almost too zealous. I had not secured permission from the government to do any digging, and had brought along a pick and shovel merely to open up narrow passages in Cave A, which had baffled us on our first brief visit there. The last day in camp Mistah Brooks sneaked out early without any breakfast. When I reached Cave C at eleven o'clock, after exploring a mile of the river with Austin, I found he had made a dozen small excavations. In one of them, which he had made under the big boulder at the southwest entrance to the cave near the entrance to the tomb, he found, at a depth of fourteen inches, a well-preserved human skull. It crumbled when he tried to get it out of the closely packed earth, but I managed to bring away both jaws, which contained a number of teeth in a good state of preservation.

The other bones of the skeleton were pretty far gone, yet I doubt if this was either a very ancient or a very important burial. I believe the skeleton was that of an aborigine of fairly late and low culture, and probably an individual of little importance; for there was nothing resembling a stone grave about the bones, and either a slab grave or a cist seemed to have been used in this region for important interments, judging by the excavations of several archaeologists, including myself.

As for the tomb, the burial or burials in it were made,

I believe, a good many hundreds of years ago. The type of dish found in this tomb was not found in the other caves I explored, and more nearly resembles certain Egyptian things than anything from Central America which I have ever seen. It would be absurd, however, to seize upon this slight coincidence as an excuse for reviving the ancient and well-riddled theory of the Egyptian origin of the Mayas.

George Valliant, an expert on the classical pottery of the Mayas, who has seen what I found in these caves, says that it rather baffles him, as it does me. This is a credit to his honesty and no reflection on his ability as an archaeologist, which already has been brilliantly proved. It is, however, a reflection of the truth known to every thoughtful student of early Central American culture: that archaeologists have, as yet, barely scratched the surface in their search for remnants of the culture of ancient Middle America.

No dishes of the type found in the tomb of Cave C were found in Cave A or Cave B, although both caves are only about a mile away. Big water jars and corn jars of the type found plentifully in Cave A have not been found in either Cave B or Cave C. Neither of these types of pottery were found in the cave at the other new site I discovered in the Cayo district, Chikin Ac Tun.

From the Rio Frio Caves, I went back to my living quarters in El Cayo—a garret over the grocery store of Mr. Lisby, the Negro gentleman who had given me permission to excavate the burial mounds on his land at Monkey Falls, San Felipe.

A young American archaeologist whom I knew came to see me there to give me some earnest advice. It seemed that I had violated a law of the Colony by taking archaeology out of the Rio Frio Caves. The law required that, before doing any work, an archaeologist must get the status of a

"concessionaire" from the Colonial Government. I had come here to make a collection of ethnology of the products of the living Indians for the Museum of the American Indian, Heye Foundation, of New York. I had stumbled on the caves, more or less by accident and had, naturally enough, taken out what I had found.

Word of this had got around, and a British archaeologist, who had once been told of the caves but neglected to visit them—probably because all conservative archaeologists regard caves with suspicion as "Rider Haggard stuff"—had informed Dr. Gann that I had violated the law of His Majesty's Colony. Thomas Gann was a picturesque old Britisher who was skinny and rather crabbed but likable. Formerly he had been Port Doctor of Belize, with card playing and archaeology as his hobbies. The point of the young American archaeologist's visit to my garret was to tell me that Gann had informed the Colonial Government to take my collection away from me when I reached Belize. It would be a disarming tactic, thought my friend, for me to wire the Acting Governor that I had found archaeological treasure of some value and should like to discuss the disposition of it with him when I reached the coastal capital.

I sent the wire, and a few days later called on the Acting Governor. He was all friendliness and smiles. He thanked me for my telegram and said he did not need to look at my collection. Certainly, I might box it and ship it to the Museum of the American Indian in New York.

Twenty-four hours later, my collection was boxed and on the dock, waiting for tomorrow's steamer. I went back to the Belize Hotel to have a drink in celebration of my good luck. I had the drink and was leaving the barroom when someone tapped me on the shoulder. It was a man named Brunton, the Surveyor General.

"Do you realize you have violated the law of the Colony in taking out that stuff from the caves without permission?" he asked.

"But I have the permission of the Acting Governor."

"Did he put it in writing?"

"No . . . I asked him what to do about my stuff and he said that I might have it. That's all."

"Then he has violated the law himself. Only the Colonial Council can give you such permission—and then it would be permission to take out only half of it. By law, one-half of all archaeological collections made here remain the property of the Colony."

So I had to hire a dray to take all my boxes to the Council chamber, where they were opened, and my vases and jade earplugs and potsherds spread on the two long council tables under the portraits of the British King and Queen. They remained there, closely guarded, for more than a month. And I had to postpone my departure for Guatemala.

First, there was a delay of two weeks before the Council could be assembled. When they did meet, however, they very generously voted me—*ex post facto*—the status of a concessionaire. That meant that I should get half of the collection anyway. Naturally, that pleased me, but it pleased me doubly because it showed that I had the affection or, at least, the respect of most of the leading citizens of Belize. The seizure of my collection by the Surveyor General had become the chief subject of conversation at the Polo Club and at the Golf Club. Many a solid Belizian told me confidentially that the action of Mr. Brunton, in overriding the generosity of the Acting Governor, was rather resented.

There was now another delay while the Council arranged

for the division of the collection. The law stated that a coin should be flipped between the actual collector and a man appointed to represent the Colony. Whoever won the toss was to have first choice, the other man second choice, and so on, alternately, through the whole collection.

The delay now was due to the fact that Dr. Gann had just sailed for Europe, and there was no Britisher in town of sufficient archaeological training for the Council to trust him as their representative. Several sly questions were put to me as to what I considered was the best thing in the collection. I had been so well treated thus far that I gave my honest opinion that the polychrome vase, with sixteen curious designs on it which might possibly be glyphs, was the piece I valued most. Two somewhat similar vases and the large jade earplug were certainly "museum pieces" also.

After several days more, I was notified that a British archaeologist named Clive-Smith would soon arrive from the British Museum diggings at Lubaantun, in the south of the Colony, and that he would be asked to flip the coin with me.

Mr. Clive-Smith asked me out to the Polo Club for a Scotch-and-soda. Over the third one, he said:

"I suppose you'd rather have that best polychrome vase than any other piece if you win the toss."

"That's right."

"Well, I'll tell you something, Mason. As an archaeologist, I think the Colony is taking too much when it takes half of a collection it perhaps never would have seen except for your industry, and the money your museum backed you with. I think, at the very least, they ought to give the first choice to the man who gets the stuff. If I win the first

choice, I am going to take that big jade earplug. Seems to me that's only sporting."

Two days later, I was told it had been decided that such a young fellow as Mr. Clive-Smith lacked the necessary experience to choose for the Colony. So I should have to wait a few more days until Captain Gruning, of the British Museum, came down from Benque Viejo. Gruning would be asked to choose for the Colony.

By now, everyone in Belize was agog over my collection. You would have thought there was a clue to the lost gold of the Mayas involved.

A week later, after Gruning's boat had come down the river, he took me out to the Polo Club, and over his first Scotch-and-soda, he made a speech in which he expressed the very views of Clive-Smith.

"It's only sporting," said Captain Gruning, "that the man who finds the stuff should have first choice. If I win the toss, I shall choose that big jade earplug. You may depend upon it."

Well, he won the toss, and chose the earplug. Taking them by and large, the British are very good sports.

Chapter Eight

ULUA VALLEY

THE SOUTHERNMOST DIVISION OF ancient Maya territory was my next field of operations. The expedition which I took to the Republic of Honduras was quartered in Progreso. We expected to do some digging there, but our practice of dirt archaeology was postponed again and again because it was easy to get a large collection of Maya relics by purchase from Americans and natives who had stumbled on them by chance. I had never visited a region where archaeological specimens were so plentiful as they were in the Ulua Valley.

The town of Progreso is on the very edge of the eastern bank of the Ulua River. Twelve miles west of this stream and on the River Chamelecon, which flows into the Ulua nearer the sea, is the town of La Lima. The Chamelecon divides a small, old, and very dirty native settlement called Old La Lima from the New La Lima. The modern town has an American hotel, a big sugar mill, and many barracks for laborers employed there in the banana and sugar cane industries. The leading industrial organization was the Cuyamel Fruit Company, until it merged with the United Fruit Company several years ago.

The Cuyamel owned a big zone running down toward the sea between the Ulua and Chamelecon Rivers. Like a much wider expanse to east and west, this zone is covered with mounds. Many are burial mounds and are generally small. Others are large, flat mounds which served to support buildings long since fallen. Stonework is comparatively rare, so it seems likely that most of the buildings were made of wood, with thatched roofs. Therefore it seems probable that the Maya, or affiliated tribes, which occupied this region were less skilled in architecture than those tribes which lived in Guatemala, Yucatan, Campeche, or other countries to the north, where the traveler finds numerous stone remains of temples and palaces. Still, it is not certain, for there is much less stone here with which to work.

Some of the mounds along the Ulua were intended to lift the houses on them above the reach of the waters in flood time. Even where there was no danger of flood, the Maya always put his house on a substructure of earth or mud. It is hard to date these mounds exactly. They may have been built at about the time when, in another land, King Canute was ordering the waters threatening his kingdom to fall back. They may have been built when the Normans were crossing the English Channel. Some of them may have been built just before Columbus crossed the Atlantic. It is fairly easy for an archaeologist to tell whether or not an antiquity was made before the white man reached America, because the white man's influence spread like wildfire and was promptly reflected in native pottery, weaving, and other products. But it is not so easy to determine just how many years before Columbus this or that Indian product was made. Crude figurines, which archaeologists call "archaic" for lack of a better term, are thought to

indicate that a people of lower artistic ability occupied this region before the Mayas. The Mayas' earliest recorded date corresponds to 291 B.C. by our calendar, although it is quite possible that they were in Central America many hundreds of years before that.

Once the Maya culture got a fair foothold, changes seem to have been rather slow in coming. Century melted into century, with little change in the lives of the people, if we may judge by what they have left behind for us to study.

Certainly, the Ulua River was a trade route of much importance in those days. We found evidence that the Aztecs, from upland Mexico, had penetrated here. So had the Caribs, that great conquering tribe of South American red men which swept over the Leeward Islands, the Windward Islands, and the West Indies in general.

It was a trade route of importance for us on this expedition. We had scarcely settled in Progreso when we heard that an engineer working for the United Fruit Company, over in La Lima, had a remarkable piece of clay sculpture, the head of a Maya noble. The head proved to be as good an example of Maya sculpture as I have seen, and worthy to be compared with the best art of any people. It showed how the characteristically aquiline profile of the American Indian had been considerably flattened by the Maya custom of lashing boards at the forehead and back of the head of an infant. This practice was in accordance with the prevailing Maya standard of beauty and is neither more nor less absurd than the former Chinese practice of dwarfing the feet of women, or our custom of depriving men's faces of the hair which nature put there.

The place for such rare works of art as this Maya sculpture is certainly in a museum, where they can be protected against accidental breakage and preserved for the edifica-

tion of the public. One despair of the archaeologist is the amateur collector who insists on keeping rare pieces in his house, with no adequate protection. The result always is that eventually they are lost or broken. In fifteen years of collecting for museums, I have kept nothing for myself but two stone axheads of a common type. Mr. Pierce, the United Fruit Company engineer, proved to be an intelligent gentleman who saw the selfishness of an individual's keeping for himself what was really the legacy of a glorious past to our whole modern civilization. He sold me the head for the museum.

Of course the disadvantage in buying archaeology is that you do not learn nearly so much about it as you do when you get it by your own excavating. When you dig, you can learn a great deal by noting the circumstances under which the vase or the figurine came to be put in the ground, its association with other utensils or art objects, or with the bones of the men and women who made such objects hundreds or thousands of years ago. Never, however, have I visited a region where archaeological specimens were so widely appreciated as in the Ulua Valley. This appreciation comes mainly from the large number of intelligent Americans employed by the big fruit companies. They have read books and magazine articles by archaeologists and have learned the importance of preserving the pottery or stone implements which they find in their rambles, or which their laborers stumble across in cultivating the ground.

The amateur collector often is a thorn in the side of the professional archaeologist, but on the whole he does a great deal of good. He preserves works of art which might otherwise be destroyed by native vandals. It is tragic how many fine vases the collecting archaeologist hears have been hacked to pieces with a machete by this or that drunken

peon; how many fine buildings of stone have been torn down to build the walls of cow corrals, or ground up to serve as a bed for modern roads. A great deal of this sort of vandalism goes on, perforce, in the Ulua Valley; but on the whole there is much less than in other parts of Central America. The professional archaeologist has the amateur collector to thank for that. The realization that even a fragment of a fine piece of polychrome pottery has a money value to a museum has saved many a sherd. It is from sherds that archaeologists gradually are putting together the story of a people whose books, written on pages of wood fibre covered with stucco, were destroyed by the bigotry of early Spanish prelates.

The collector is fortunate who works in a field like this, where he enjoys the co-operation of big corporations like the United Fruit Company, the Standard Fruit Company, and the Chicle Development Company. For days we went up and down the narrow gauge tracks which pierce the banana fields, on little cars propelled by gasoline. We rode mule-back through banana plantations and sugar fields, our pockets bulging with small change when we went out, our knapsacks laden with pottery and figurines and spear-heads when we came back. Not all, not even half of this beauty, has reached the hands of the American or upper-class native collector. The bulk of it is still in the hands of the laborer who lives in barracks supplied by the great corporation of American capital; or in the hands of the small farmer who inhabits a picturesque manacca shack with his wife and numerous children and pigs and chickens and dogs. These natives almost never have change, so we had to carry three or four pounds of small silver with us on each journey. The prices asked varied a good deal. We tried to err on the side of generosity to the seller, without working

too much injustice to our Museum or to the collectors who might come here after us.

Our duties were much like those of itinerant peddlers, with the financial side of the transaction reversed. We bought instead of sold, although some few times we did find natives who wanted cash less than they coveted the dolls, small bottles of perfume, glass beads, or other five-and-ten-cent store knickknacks we had brought with us from New York for exchange with Indians in the interior. Such of our collection as we obtained by this sort of itinerant purchasing was not really typical of the output of the old Mayas. The modern peon is much more apt to preserve one of the common clay whistles in human or animal form than the rarer and more valuable painted or sculptured vase. The whistles are often grotesque, and they appeal to his sense of humor and amuse him and his children. No wonder, for some of these whistles have as many as four notes. The number of them found today is really enormous; they must have been produced in prodigious quantities. And no one knows why. The Ulua Valley was once the "whistlingest" country in the world; it would be interesting to know the reason.

We did a great deal of collecting, and still no digging. It is a temptation for the archaeologist to skimp on labor in digging in the Ulua Valley. It is so much easier to take advantage of the digging the river already has done for him. Let him get into a boat and float downstream, watching the banks and sandbars closely after the flood has subsided and he may pick up hundreds of pieces of pottery, some of it the justly famous Maya polychrome. Part of the excitement of this game lies in wondering whether the piece of a painted vase you see sticking out of a bank will turn out to be just a piece—or a whole vase. Usually, it is just a piece.

It is strange how the archaeologist, if he plies his peculiar profession very long, is inclined to forget what pottery stands for. Pottery stands for the big bowl of *posol* they use at christenings when the baby is kicking and the women adoring it, while the old men with dirty beards are probably saying to themselves, "It will turn out no better than I have." Pottery represents the five-year-old boy getting his first prize for shooting the bow and arrow, the little girl of eight getting her first prize for mixing a clever concoction of intoxicating *chicha*. Pottery represents the pompous old men who get together in the evening and admit their follies when they are out of sight of their youngers. Pottery represents the young bride, worrying about her prenuptial preparations, thrilling over her flowers and feathers, and wondering whether the maize beer has enough of a wallop or not. And it represents the bridegroom, conscious of the diagonal crease in his *maxtli*, or apron, and the old aunts and uncles hanging around in the background, pretending to be cheerful when they are really unhappy because they are not in the limelight. Finally, above all, pottery represents earth. Pottery comes from the earth and is colored with the earth—directly when you use oxide of iron, indirectly when you use vegetable dye. Pottery, in the end, goes back to the earth in burials, being both clay and dust, life and death.

In olden times people worshipped the river because it was at once a danger and a boon, a devil and a god. It drowned them with sudden floods, but it brought them the clay with which they made this very pottery, pottery so fine that they sent their big canoes of fifty or sixty paddlers on long voyages to trade it. The river would cut away one man's farm and carry it across to the other bank to double the farm of his neighbor, just as the Mississippi does today.

There were dangers to be experienced in living near the river, but the danger of starvation was not one of them. "Live high while you live and do not be a clam, was the sensible motto of Omar Khayyam." America has had her Omar Khayyams, just as Asia had hers.

Today, the river often tears up banana plants with its swirling overflows. But it also gives the soil which produces the healthiest bananas in the world. Panama disease (*Fusarium cubense*), that mysterious plant malady which came up from the Isthmus and has cut into profits through most of the banana country, does not attack the trees which grow where the Ulua has left its silt. Chemists have not yet been able to determine the magic of this ancient river. But capital has been quick to take advantage of it. To the very edge of the high steep banks, above the projecting strata of Maya pottery, the big companies have planted their banana trees. At intervals the banks are broken by irrigation canals which carry the precious waters through miles of fields on each side.

The best friend of the archaeologist here is the banana man, just as the best friend of the archaeologist in other parts of Central America is the chewing-gum man or the mahogany man. The dragline machines, great monsters like steam shovels, which rip up the flat fields to make the irrigation canals, are constantly plowing through ancient burial mounds or village sites and exposing a cross section of the lives of the early red people. This is a wasteful kind of digging from the archaeological point of view, for the machines break more than half of the pottery they uncover. But they will uncover it anyway, and the archaeologist is well paid if he follows in their wake and takes the leavings. What with both dragline machines and river digging for



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(*top, left*) Profile and full face of pottery head of a Maya noble. This head is one of the finest pieces of sculpture ever found in the Maya area. Note hair-do. The nose and ear plugs are a sign of high social standing. So is the receding forehead, artificially caused in infancy by compressing the infant cranium between boards. (*top, right*) Upper part of human figure of pottery, 7 inches, chin to top of headdress. Ulua Valley, Honduras. (*Museum of the American Indian, Heye Foundation, N. Y. C.*)

(*bottom*) These little figurines, characteristic of the Ulua Valley culture, show a great deal of skill. The woman nursing her baby, *right, second row from bottom*, is comparable in artistry to the finer things in Greek sculpture.



Maya pottery from the Ulua Valley. *Top, left:* a frog (an ancient rain god) peers over the rim of one piece of the famous Maya polychrome at another. *Top, right:* a white jar with intaglio decoration, rare and fine. *Middle row:* Especially fine are the chocolate pot, *second from right*, and the polychrome vase, *second from left*. *Bottom row:* pot at left in shape of a slipper, or wooden shoe. Piece in center is in form of a squash.

us, we decided it would be good policy to stay in the shade of the bananas for several days.

Mr. Henry George Hogaboom, of the United Fruit Company, suggested and carried out an experiment in "hydraulic archaeology." Taking a force pump in a flat boat, he threw a stream of water against the steep clay bank of the river. No placer miner ever felt more thrill than he did when the hose washed out one ceramic gem after another. There were only two complete pots among the hundreds of pieces he gave us, but an archaeologist can tell a great deal about an ancient culture even from its sherds. The two whole vessels represented the average find; for even when dragline machine or river current has not increased the rate of breakage, the percentage of whole vessels one unearths is small. The fact is that a great many pots and clay figurines were deliberately broken by the ancients when they put them into the ground with their dead, on the theory that a "broken" man—that is, a dead man—should be given only "killed" utensils to accompany him to the next world. Digging in the river banks, we found a lot of human bones, but nothing resembling graves, which seem to be rather scarce in this region, although they are common enough in other parts of the Maya territory. We worked mostly in what seemed to have been a large cemetery, where the bodies had been placed in the free ground with broken pottery around them. We also found a few beautifully made small axheads of a black variety of jadeite, and a few knives and spearheads of obsidian, or volcanic glass. Touching the polished axheads or the smooth facets of the spearheads was like meeting a great artist.

Then we heard of a cave called the Cave of Masical, at San Nicolas, a small town about eight miles west of Santa Barbara, third city of the Republic. We thought that in-

stead of taking the direct journey to Santa Barbara by truck we would take the roundabout way via Lake Yojoa, in order to see a big stone statue which we were told had been found in the bush near the eastern end of the lake.

We found the *idolo* right away. It was broken into three pieces—head, upper trunk, and lower body with the legs attached. The arms were missing. Probably some natives or, more likely, some white duck hunters had carried them off. The modern Indians are apt to be superstitious about touching relics of their ancestors.

It was a crude piece of stone sculpture, just a shade over two yards long, lying flat on its face and belly, the three pieces close together when we found it. Apparently, there is quite a bit of this sort of crude stone sculpture in Honduras. It is hard to date, although there is no doubt it was made before Columbus came. Yet the archaeologist has to be careful, for recently quite an industry in the production of fake antiquities has grown up in this republic. We had been offered chances to buy several, including two stone idols, not very cleverly made. Their headgear declared them, at once, to have been turned out since the Spanish Conquest. We were also offered a vase which, obviously, had just come from the kiln. There was nothing faked about this statue, though. The difficulty was to determine how many centuries it had been made before the white man came.

It might have been early Maya. At least, it bore some resemblance to idols Frans Blom and Oliver La Farge found in the state of Vera Cruz, Mexico. It might have been as old as those crude little figurines, antedating the better figurines of the Mayas, and called "archaic" by some archaeologists. Anyhow, this old god was too big for us to carry away. Nothing short of a motor truck could do that. Bringing a truck in here would necessitate some clearing of bush,

which would attract a great deal of attention among the natives and probably lead to our having the idol taken away from us after all. There is a law against the exportation of archaeology from the Republic of Honduras. It is a law for which I have no respect, because Honduras, itself, has no adequate museum for preserving the vestiges of a people who had a culture much higher than that of the present natives of the Republic. Until Honduras builds a museum of her own and develops one or two archaeologists capable of caring for its treasures, foreign archaeologists will continue to violate the law against the removal of antiquities. In this, they will have the hearty co-operation of the intelligent and cultivated Hondurans.

Honduras is a strange country. It has a capitol without a railroad, and a chief port, Puerto Cortes, with nothing else but railroads! However, another big port, Tela, has a great deal to recommend it. Tela is one of the loveliest places in the American, or any other, tropics. The long, crescent-shaped, creamy beach, under leaning coco palms, invites the new arrival to step ashore, and he is not bitten to death by insects when he does so, as he is on many beautiful tropical beaches. If he is known at all to the United Fruit Company, which founded and maintains new Tela on the west bank of the river, he is met at the dock or at the railway station by someone of importance in the company. We were met by Bob Beasley, secretary to Mr. E. A. Ames, then manager of the company for the Tela division. Beasley is a southerner and hospitality comes natural to him. It would not matter very much if he were not a southerner, for all the Americans in the tropics are hospitable to their own kind, *en voyage*.

In the village of Trinidad, Honduras, we went from

house to house, and picked up four nice small axheads of polished black stone—dark jadeite.

I met a member of our party, by prearrangement, at the best local *cantina*. He had found a beautiful thing. It was a stone drill about six inches long, tapering down to a point like a gigantic needle, and as smooth as if it had been turned out by the best modern lathe. It actually was turned out with a string of henequen (sisal) fiber dipped in wet sand, and no doubt with many months of labor.

On the bar, there was a rough, grayish-looking semi-cylindrical object, about nine inches high, five inches in diameter at the bottom, and four inches at the top, which was slightly hollowed out. I did not notice it until the bartender put my change in the concave upper surface. Then I looked at it closely.

“What’s this?”

“*Hueso antiguo* (Old bone),” the bartender answered.

He was right. It was a radius (one of the forearm bones) of a *megatherium*, the giant ground sloth of Pleistocene times. I ended by buying the thing from the bartender for fifty cents. He thought I was crazy.

“It has been in my family for generations,” he explained. “so I can’t tell you where it came from, but it came from somewhere around here. My family has been here ever since the Spanish Conquest, and none of us has traveled much.* I have just had it here on the bar for curiosity and good luck. But fifty cents is a lot of money. If you want it, take it.”

He put it into a canvas sack and I lugged it back to the hotel, delighted with this palaeontological by-product of our archaeological expedition. It is only fair to admit that

* His face and head indicated that he may have been four-eighths Negro, three-eighths Lenca Indian, and one-eighth Spaniard.

I was not sure it was megatherium until months later when I showed it to Mr. Barnum Brown, Curator of Fossil Reptiles in the American Museum of Natural History, and to Mr. Childs Frick at the same institution. Only one specimen of megatherium had been previously reported from Honduras. The bartender assured us that such "big bones" were very common in the neighborhood. Later, at Comayagua, I bought several other megatherium bones from a local amateur archaeologist who had excavated them near that town. The hills thereabouts are of sedimentary rock, and his statement seemed plausible. This big sloth came to North America from its South American home when the two continents joined in Miocene times.

The next day we rode mules to San Nicolas. San Nicolas has one curious characteristic which I have not noted in any other town—Central American, Chinese, or African. Its scavengers are cows. Of course, the people use the little old-fashioned outhouses—that is, the richest people do. They are perched on stilts high enough for cows to get in under them, so I can vouch for what I have just said.

We went around to call on the *commandante*. By this time, everyone in San Nicolas knew that four gringos had arrived, with intent to visit Cueva Masical. The *commandante* was a shoemaker. We found him at his last. He was very hospitable, but he thought we were pretty easy. He said he would give us permission to visit the cave in the morning, but that it was a dangerous place, and we would need thirty-five men, at one peso and a half each, to protect us from jaguars. I was firm. I showed my letter from the *commandante* of Santa Barbara, who was morally, though not legally, the commanding officer of this *commandante*. I insisted that I needed only three men, that a peso apiece was a big wage for a half day's work; and that, if he did not

agree, I was quite willing to pass up Cueva Masical and go on to Cueva Pencalique. The bluff worked. I had to hire only three men, but about half the town followed us to the cave. Most of our followers were on foot.

The cave has an open mouth about a hundred and fifty feet high and a hundred feet wide. We went downhill from the mouth of the cave, stumbled over slippery rocks, took the wrong passage time and again, and had to retrace our steps to the main tunnel before pushing on and on into the earth, with the water seeping down upon our heads. Surprisingly, there were no bats.

We tied the end of a ball of string at the entrance and unrolled it as we went along. When we had come to the end of it, we put down a lighted candle every fifty yards. When we had used up our two dozen candles, we wormed through a narrow tunnel on our bellies and came out right under a big flat rock. On top of this rock there were about a hundred stones of the size of a fist. There is no doubt in my mind that they had been put there by some former defenders of the cave to beat out the brains of any invaders crawling through that tunnel. Just beyond this point, we began to find skulls incrustated in lime which had dripped from the roof in the seeping rainfall of centuries. Were these the skulls of the cave's defenders, starved in some ancient siege?

We found several big pots, which had held grain or corn, but all were broken. Some of them were about two and a half feet high. They were reminiscent of the pots I had found in the Rio Frio Caves in British Honduras, but they were made of coarser ware.

We groped back toward the entrance to Cueva Masical, picked up the candles, and rewound our ball of string. As the shorter candles had burned out, we missed some of

them. We had been in the big cave four hours, and we had not found the end of it. Perhaps it really goes eighteen miles to the Cueva Pencalique, as the natives believe.

Our hands and faces were grimy and scratched. Our clothes were soaked with sweat and torn by sharp stones. We sat down, just under the upper lip of the entrance, and ate our lunch. We gringos had canned salmon, bread, and warm beer, which is very good when you are used to it. It made us sleepy. We lay on our backs in the soft earth made of the leaves blown in by the breezes of countless centuries.

When we awoke and started downhill, I was behind the others. I turned for a farewell look. As the faint daylight sifted through the trees behind me, I saw, on the limestone wall of the cave door, the shadow of a bearded man in a wide straw sombrero, with a long flashlight in one hand and a camera in the other. Maya sculpture showing bearded men, in the attitude of conquerors, led Dr. George Vaillant to suggest that a bearded race ruled these lands before the ascendancy of the Mayas. I wondered how many centuries had shown how many shadows upon that silent wall. And I reflected upon what it would be worth to science to have a complete series of those silhouettes.

Then I snapped on the flashlight and aimed it at the wall. Whereupon, the man with the beard vanished, being of a race as impermanent as those earlier bearded men; a race as impermanent as the early Maya priests with their feather headdress and great, jade earplugs; a race as impermanent as that whose earliest savage hunters, with stone-headed clubs and dart-throwing sticks, had once thrown their shadows on that wall.

Chapter Nine

THE MAYA WAY OF LIFE

SOME YEARS AGO I CROSSED THE Mexican Territory of Quintana Roo on a mule for the purpose of buying a shirt. The shirt was a frilled-and-fluted home-made one and it was the personal property of Paulino Kamaal, chief of the Tulum Indians, a degenerate subtribe of Mayas. I have heard that Kamaal was highly amused at the pains I took to secure his shirt for the Museum of the American Indian in New York. He laughed scornfully after I left and hoped that "more crazy scientists will come here with good silver for our worn-out shirts."

These people have sunk far below the level of the old astronomers! Kamaal, his tongue showing cotton-white between his toothless jaws, told me with great glee that he had recently driven out a Mexican engineer who was engaged in taking a star sight as part of a survey for chicle exporters.

"We don't want you white men moving our stars around!" Kamaal complained.

Kamaal has killed many a white man in his time. Even if he had not sold me his shirt, the trip across Quintana Roo would have been worth while for the spectacle of the

old rascal. He was not a pleasant sight, as he giggled in his hammock and wagged his cotton tongue like a white snake. But he was a memorable example of a modern Maya chief.

The Tulum tribe of Indians is a branch of the Santa Cruz Mayas, who are virtually independent of Mexico. They have some features of social organization suggestive of a feudal community in medieval Europe. There is compulsory military service, and each village takes its turn at providing a garrison for the capital of the tribe. The capital is called Santa Cruz de Bravo by the Mexicans. The Indians call it Santa Cruz de May, after their present liege lord, "General" Francisco May, whose very name bears witness to the purity of his Maya blood.

May has grown rich by taxing foreign chicle companies which obtain sap for chewing gum from the sapote trees of Quintana Roo. He has few ways to spend his wealth. A brief interest in travel was checked a few years ago when he went to Mexico City and secured a French demimondaine for a wife. His people forbade her to come to his capital. They did not object to her morals, but they resented her foreign blood. Recently, the growing cosmopolitanism of his subjects permitted May to import two mestizo wives from Merida, capital of Yucatan. "General" May seems destined to be unlucky in love. He decided that the new wives were not decked out in a style befitting the spouses of a great chief, so he sent them to Belize with a generous cash allowance for trousseaux. The ladies, however, kept the money and never returned.

The modern Maya chiefs would have been nobler and more distinguished men if they had lived five hundred years ago. There was virtually no middle class among the Mayas when the Spaniards came to conquer. The members of the

small, dominating aristocracy led a life apart from the average, lower-class Indian. They lived in houses so luxurious as to impress Cortes, who described them in his "First Letter" to his sovereign, Charles V of Spain:

There are some large towns well laid out, the house being of stone, and mortar when they have it. The apartments are small, low, and in the Moorish style, and, when they cannot find stone, they make them of adobes, whitewashing them, and the roof is of straw. Some of the houses of the principal people are very cool and have many apartments, for we have seen more than five courts in one house, and the apartments very well distributed, each principal department of service being separate. Within them they have their wells and reservoirs for water, and rooms for the slaves and dependents, of whom they have many. Each of these chiefs has at the entrance of his house, but outside of it, a large court-yard, and in some there are two and three and four very high buildings, with steps leading up to them, and they are very well built; and in them they have their mosques and prayer places, and very broad galleries on all sides, and there they keep the idols which they worship, some being of stone, some of gold, and some of wood, and they honour and serve them in such wise, and with so many ceremonies, that much paper would be required to give Your Royal Highnesses an entire and exact description of all of them. These houses and mosques, wherever they exist, are the largest and best-built in town, and they keep them very well adorned, decorated with feather-work and well-woven stuffs, and with all manner of ornaments.

The three interdependent institutions of church, state, and science were kept in active operation by the members of the aristocracy. Cogolludo described some of the duties of the nobles:

When the Lords of the City of Mayapan were ruling all the land was tributary to them. The tribute was in small cotton mantles, native fowl, some cacao in those places where it was

got, and a resin which served as incense in the Temples, and all told it was very small in quantity. All the citizens and dwellers who lived within the City of Mayapan were free from tribute; and in the city all the nobles of the land had houses. . . . They who dwelt without the City and in the rest of the Province were vassals and tributaries, not being of those who had houses there in the capacity of land-holders; but they were greatly favored by their Lords because they themselves served them as Advocates looking out for their welfare with great solicitude whenever anyone asked that it be so. They (the vassals and tributaries) were not obliged to live in assigned Villages since they had license to live and to marry with whomsoever they wished; the object of this was to ensure multiplication, for they said that if the people were hampered, there could not fail to result a diminution. Lands were held in common, and so between the Villages there were no boundaries or landmarks to divide them. . . . Also the salt-works which are on the Shores of the Sea were held in common, and those who dwelt nearest to them were wont to pay tribute to the Lords of Mayapan with salt which they had got. . . .

The Lords were absolute in power and caused their orders to be executed with severity. There were Caciques placed in the Villages, or some other leading person to hear suits and public demands. This officer received the litigants or disputants, heard the cause of their coming, and, if the matter were a grave one, talked it over with the Lord. In order to try the case, other Ministers were appointed who were like Advocates and Constables and who always attended in the presence of the judges. . . . They were not in the habit of writing down the lawsuits, although they had characters (of which many are to be seen in the ruins of their buildings). All was set forth in words by means of the Ministers before referred to, and what was then and there determined remained valid and permanent without either of the parties venturing to work against it. But if the affair which was to be tried concerned many, they had a great meeting of all the interested together; then the gist was communicated, upon which followed the decision of the matter.

While aristocrats were rich in power, they were only slightly more prosperous than common men, for everyone had a share of the nation's crops or industry. The lords had luxurious homes partly because they were on closer terms with the gods than the lower class.

The common farmer lived in a house with thatched roof and walls of slim, upright logs stuck in the earth. One type of farmhouse had thatched eaves which reached the ground. In an agricultural township each family was allotted, by the Government, 3.67 acres of land for private cultivation. Like the early colonists in New England, they turned to and lent a hand to their neighbors at planting and harvest time. Moreover, they were free to go farther afield and cultivate a piece of the common land if they had need of it for the support of a large and increasing family.

At twenty, the Maya took a wife selected by his parents through a marriage-maker. The dowry for the marriage was all on the groom's side. His father had to give a present to the bride's parents; his mother made the clothes which the young couple were to wear. He was married, however, at the bride's home, where a feast constituted the marriage ceremony. Then the poor fellow found himself in bondage, living with his father-in-law and working for him over a period of five or six years. He seldom had more than one wife at a time but desertion was common—even when there were quantities of children—and so was divorce. There was no punishment for either desertion or divorce, but adultery was a crime for the injured husband to punish or forgive as he saw fit. The punishment, if that was what the deceived man selected, was death. The adulterer met it by standing still to receive a large stone, dropped on his head from a height. The disgrace to the sinful wife was supposed to be punish-

ment enough for her. Nor was there any stigma to remarriage. Widows and widowers were always free to remarry. The marriage ceremony was considered completed if a widow entertained a widower at supper.

The routine of the average Maya's day began at daybreak. As the tropical dawn "came up like thunder," he rolled out of his hammock. It was a double hammock if he was married, called *hammaca matrimonial* by today's Latin Americans. The moment he left his hammock he went to the nearest stream or cenote to take a bath before breakfast. That habit pained and surprised the nonbathing Spaniards. Europeans still are amazed by the American habit of daily bathing—a custom which, like smoking, chewing gum, playing basketball, and building skyscrapers, we have adopted from the first Americans. One of the Spanish conquerors, Bishop Landa, declared that the dark skin of the Mayas was due entirely to too much sun and too many baths. Santiago Mendez, reporting as agent of the Department of Public Works on the Indians of Yucatan in 1861, speaks about the persistent bathing of Maya women:

Their bodily cleanliness almost borders on superstition, for they consider a person who does not wash her body every day as not quite sane or reasonable. For their daily bath they heat a stone they call *sintun* in the fire, and when it is well heated they throw it into the water they have prepared for their bath.

Before the Spanish Conquest, the ordinary Maya's wife served his breakfast after he had bathed. She turned her back as she served it and could not, under any circumstances, eat with him. Maya food staples were varied. The common, indispensable dish was hot *posol*, a cooked cereal of corn and water, sometimes sweetened with a little honey. Fish and game, turkey and turtle eggs, cassava bread, choco-

late, and margarine made from cacao seeds were ordinary items of food. Cortes' "First Letter" said:

Their food is maize and grain, as in the other Islands, and *potuyaca*, as they eat it in the Island of Cuba, and they eat it broiled, since they do not make bread of it; and they have their fishing and hunting, and they roast many chickens, like those of the Terra Firma, which are as large as peacocks.

The chickens to which Cortes referred were turkeys, unknown to Europeans. He also speaks, in his "Fifth Letter," of ". . . dogs of the species they raise to eat (and which are exceedingly good). . . ."

After breakfast the working man gave an extra twist to his waistband, much as the present-day American hitches up his trousers, and went to work in his cornfield. Besides farming, other occupations open to him were hunting, fishing, boat building, and seafaring. Usually he went barefooted. When he was shod, his footgear consisted of sandals of hemp or deer hide. His waistband was less than six inches wide and hung down behind and in front, the ends beautifully embroidered in feather work. A square cotton cloak covered his shoulders. Cortes described these cloaks as "large mantles, very thin, and painted in the style of Moorish draperies." The Maya's hair, except for a burnt patch on top of his head where the hair grew short, was long and wrapped around his head, with the ends hanging behind. He filed his teeth and took great pride in their sharpness. He also set considerable store by any tattoos on his body, for they were painful to acquire. Men without tattoos were chaffed a great deal and dubbed as the Maya equivalent of "sissies" by their more stoical neighbors. There were other practices of personal adornment. According to Cortes,

. . . In each province their customs differ, some piercing the ears, and putting large and ugly objects in them, and

others piercing the nostrils down to the mouth, and putting in large round stones like mirrors, and others piercing their under lips down as far as their gums, and hanging from them large round stones, or pieces of gold, so weighty that they pull down the nether lip, and make it appear very deformed.

While the average man was toiling at the day's manual labor, the rich man spent the day at some piece of religious devotion closely associated with commerce. From Cortes' description of a chief's daily duties one gathers that the working man had an easier time of it.

Every day, before they undertake any work, they (the chiefs) burn incense in the said mosques, and sometimes they sacrifice their own persons, some cutting their tongues and others their ears, and some hacking the body with knives; and they offer up to their idols all the blood which flows, sprinkling it on all sides of those mosques, at other times throwing it up towards the heavens, and practising many other kinds of ceremonies, so that they undertake nothing without first offering sacrifice there.

The Mayas had their "Rotary Clubs" and "Lions Clubs" for rich men. The meetings were conducted with religious ritual comparable to our present parliamentary law but even the wining and dining of commercial organizations followed a devotional pattern that was designed to please the gods.

Maya wives had a busy day, too—not only with the housework but with the education of their children, of whom they took sole charge. When there was a new baby, on its fourth or fifth day on earth its mother placed it face down in a wooden cradle and tied two boards tightly to the front and back of the infant's head. This insured the child's growing up with a "sugar-loaf" head, a mark of Maya distinction. Young boys had to let their mothers scald their faces with

hot water in order to keep the skin smooth and hairless.* There was little for a Maya mother to do in the matter of dressing the small children, for they were allowed to go naked up to the age of five. They were playful, fun-loving children, full of mischief and likely to be trying to a short-tempered woman with too much work to do. A mother punished childish misdeeds by physical means—pinching arms or ears, or rubbing small bodies with a kind of stinging pepper. The sons who were old enough to have their faces treated against beards were cared for ahead of daughters nearing the marriageable age, whose hair must be braided carefully in two or four plaits.

Maya women liked ear ornaments and amber nose rings. Their teeth, like those of the men, were filed. In imitation of the men they also anointed themselves with a red preparation on dress-up occasions. Their idea of make-up was to wear tattoos on the naked upper body, except on the breasts. Cortes described women's dress in his "First Letter":

The women of the ordinary people wear, from their waists to their feet, clothes also very much painted, some covering their breasts and leaving the rest of the body uncovered [sic]. The superior women, however, wear very thin shirts of cotton, worked and made in the style of *rochets*.

Cogolludo's comment on women's fashions is also worth quoting:

The women use *Uaipiles*, which is a garment that falls from the throat to the middle of the leg, with an opening at the top, where the head goes, and two others at the top of the sides for the arms, which are covered half-way down. Because

* The Mayas distrusted beards and never allowed themselves to grow any. It is believed that they had a legend of once having been conquered by a race of bearded men.

this garment is not tied in at the waist, it also serves as a shirt. From the waist to the feet is another garment called *Pic*, and it is like petticoats and goes under the outer garment. Most of these are worked with blue and red thread, which makes them sightly. If a Spanish woman is seen in this dress it looks, on her, most improper.

Since the Mayas were antifeminists, women had no social life save among themselves. They were hard-working and chaste for the most part, but they were jealous and sometimes flew into violent tempers at exasperating husbands. Their custom was to avoid men as much as possible. When they met a man, as when they served one, they turned their backs. They liked, as their husbands did, to get drunk now and then, but never with men. Housewives had private orgies together on beer made from corn or on honey wine. American Indians never had distilled liquor until Europeans introduced it.

Hospitality was almost a religion with the average Maya, and banquets the favorite form of entertainment. It was a matter of pride to the Maya to give a finer banquet than his neighbor. The wives, of course, did the work but never shared in the fun. A man who was going to give a banquet would save for several months in order to entertain lavishly. His guests feasted at small tables which accommodated two to four persons. There was an entire roasted bird for each person, and fresh-baked bread. The drink was cocoa. When the food had been consumed, huge earthenware jars of honey wine were brought out and served by cupbearers. Each guest drank until he was helplessly drunk. As soon as a man reached the stage of falling off his stool somebody signaled his wife, who appeared from the rear part of the house and took him home, with his gifts. The host gave each guest "party favors" of a small stool, a cloak, and a

handsome cup. The wife was on the lookout for trouble when she got her rollicking husband home, for he came from a race of quarrelsome drinkers. It was usual for him to brawl with his wife when he was drunk. Frequently, he would burn his house down in order to give vent to his feelings.

These banquets for men were so important socially that each guest was expected to return the compliment as soon as he had saved enough money. If a guest happened to die before he got around to giving a banquet, his family inherited his obligation and the eldest son had to come across with an invitation.

The men had dances, too—both religious and social. Women were not admitted to them because it was thought shameful for a man to dance with a woman. One of the dances had two performers in the center of a circle of other men. One of the two danced squatting, with a small wooden pole in his hands. His partner was equipped with a handful of reed lances, which he hurled at the squatting dancer, who parried them with his wooden pole. Another dance required eight or nine hundred men with banners. The music was provided by several varieties of drums, flutes, whistles, trumpets, and rattles. Today we probably would call this last dance a parade.

The greatest of all sports to Maya men was a ball game much like our basketball. It was played with a rubber ball in a huge court enclosed with high walls. A stone ring was set vertically into each wall and the object of the game was to drive the ball through the ring defended by the opposing side. The game was said to have been introduced by the gods and was always accompanied with some ritual. The largest and best-preserved Maya ball court is at Chichen Itza, with temples at both ends and a third temple on top

of one of the walls. The game was popular among the ancient Americans of both Mexico and Yucatan. Herrera, who accompanied Cortes to the court of Montezuma, witnessed one of these ball games played by the Aztecs.

The Emperor took much delight in seeing the game of ball which the Spaniards have since prohibited due to the mischief which often happens at the game. By the Aztecs this game was called *tlachtli*—being like our tennis. The ball was made from the gum of a tree that grows in hot countries, which, after having holes made in it, distills great white drops that soon harden and being worked and molded together, this material turns as black as pitch. The balls made thereof, although quite hard and heavy to the hand, did bound and fly as well as our footballs and there was no need to blow them, nor did they use staves. They struck the ball with any part of the body as it happened or as they could most conveniently. Sometimes he lost who touched it with any other part but his hips, which was looked upon among them as very dextrous and for the purpose that the ball might rebound better they fastened a piece of stiff leather to their hips. They might strike the ball every time it rebounded, which it would do several times one after another, in so much that it looked as if it had been alive. They played in parties, so many on each side, for a load of mantles or what the gamesters could afford. They also played for gold or feather work and sometimes they played themselves away. The place where they played was a ground room, long, narrow and high and higher at the sides than at the ends. They kept the walls plastered and smooth, also the floor. On the side walls they fixed certain stones like those used in a mill, with a hole quite through the middle. The hole was just as big as the ball and he who could strike it through thereby won the game, and in token of its being an extraordinary success which rarely happened, he had the right to all the cloaks of all the lookers-on.

It was very pleasant to see that as soon as ever the ball was in the hole, those standing by took to their heels, running away with all their might to save their cloaks, laughing and

rejoicing, while others scoured after them to secure their cloaks for the winner, who was obliged to offer some sacrifice to the idol of the Court and to the stone whose hole the ball had passed.

Every Court had a temple day where at midnight they performed certain ceremonies and enchantments on the two walls and on the middle of the floor, singing certain songs or ballads, after which a priest of the Great Temple went with some of their religious men to bless it. He uttered some words, threw the ball about the court four times (toward the four points of the compass) and then it was consecrated and might be played in, but not before.

The owner of the Court, who was also a lord, never played without making some offering and performing some ceremony to the Idol of the Game, which shows how superstitious they were even in their diversions.

The superstitions of these first Americans, like the folklore of every civilization, were obscure in origin. Crossed eyes or a squint, for instance, had some special significance. A squint was considered a characteristic of beauty, and mothers tried to induce their children to squint by dangling some object from their hair just above their eyes. On one occasion early in the fifteenth century some ten Spaniards who had been shipwrecked were taken by the Mayas and condemned to death. Two of the number were spared. We do not know why; but if they were cross-eyed that might well have been the reason.

As already stated, the Mayas had no beasts of burden. Cortes related in his "Fifth Letter" that he left a horse in the town of Peten-Itza: "In this town, or rather at the plantations, I left a horse which got a splinter in his foot and was unable to go on; the chief promised to cure it but I do not know what he will do with him." Villagutierra was able to tell of the fate of Cortes' horse nearly two centuries later. In 1697 some Franciscan monks went to Peten-Itza with

the intention of building a church there. They found a large temple dedicated to a well-carved stone figure of a horse. It was an image of Cortes' lame horse which, the natives told them, had been venerated greatly by the Indians. They had fed him on flowers, birds, and other delicacies as a mark of esteem. Naturally, the animal starved to death. After his demise he was given the status of a native god of thunder and lightning, with the title of "Tziminchak."

The Maya religion had both confession and baptism in its ritual. The Spaniards thought this an indication that Saint Thomas had preached Christianity among the Mayas fifteen hundred years before. A sounder view is merely that the aboriginal religious practices happened to be similar, in certain ways, to those of Christianity.

Baptism day was picked carefully by the priests so that it would not fall on a day of ill omen. The house selected for the ceremony was cleaned and strewn with leaves. The boy candidates, with one godfather for all, were in one group. The girls, with one godmother, were in another. The word for the baptism—*zihil*—means rebirth. The first step of "re-birth" was to drive out the evil spirits. Four *chacs*, sacristans or acolytes, stretched a cord between them from the four corners of the room, thus leaving the children in a square around a priest seated at a brazier. Each child came up to the priest and received a few grains of maize which were thrown on the brazier. After the ceremony the brazier, the ropes, and a bowl of wine were bundled up and sent out of the town by a man who neither could drink nor look behind him until he had accomplished his mission. Then the leaves on the floor were swept out and renewed. The children's heads were draped in white cloth and they had to confess their sins. After they had confessed, the children were blessed by the priest and sprinkled with water by means of

a short, carved stick. Each child received nine taps on the forehead with a bone and had face, fingers, and toes rubbed with perfumed water. The boys—not the girls—then smelled of bouquets of flowers, smoked a few puffs from a pipe, and were given food. After offerings had been made to the gods and gifts had been given by the parents to the newly baptized, an enormous feast was held, accompanied by the usual orgy of drinking.

Maya parents could hear their children's confessions. A husband could hear his wife's and vice versa, if no priest were present. Few adults confessed unless they were frightened by illness. Sins that had been planned never were confessed. The gravest sins were adultery, robbery, homicide, and false witness. Thieves were punished by being enslaved to those whom they had robbed, but if they were able to return the stolen property they might be set free. Rich men acquired great numbers of slaves in time of famine, when free men stole food to live.

Anyone who stole money had a cumbersome load of booty. Cogolludo says:

The money that they used was little bells and jingles of copper, which had value according to their size, and some red shells, which were brought from far away from this land, which they strung, after the manner of rosaries. Also they used as money grains of cacao, and of these they made the most use in commerce, and certain precious stones and discs of copper. . . .

The Mayas gave loans to each other, without charging interest. Contracts always were verbal. Cogolludo tells of them as follows:

In sales and contracts they had neither writings to oblige them to keep their word nor promissory notes with which to give satisfaction, but still the contract remained valid provided

only that the parties drank together publicly before witnesses. . . . The debtor never denied the debt even though he could not pay at once; but all was made certain by the debtor's confessing his debt, for the wife, children and relatives of the debtor would pay the debt after his death.

The Mayas had a terrible fear of death—so much so that a house usually was deserted after a death had occurred in it. The relatives of a deceased person fasted for a number of days, wept in silence during the day, and howled in grief and agony all through the nights of mourning. A man was buried with maize and stone money in his mouth, so that he would not be impoverished and hungry in the next world, and his private idols were buried with him. A priest or a sorcerer was buried with his books or his medical instruments. Those who had led evil lives were thought to go to a place called Mitnal, below the place for good people, where the prince of cold, damp darkness ruled over the endless existence of forfeited souls. Heaven was pictured by the Mayas as a tree-shaded place, without care, and with much feasting and dancing. Life in both places was believed to be immortal. There was a curious respect for suicides—despite the universal fear of death—as persons certain to go to heaven. There was supposed to be a special suicide's heaven, abounding in fine fruits and vegetables. This belief led to many suicides among the Mayas, often over very trivial matters.

Human sacrifice was made to appease the gods in times of deep distress. Cortes describes it with horror, in his "First Letter":

As often as they have anything to ask of their idols, in order that their petition may be more acceptable, they take many boys or girls, and even grown men and women, and in the presence of those idols they open their breasts, while they are

alive, and take out the hearts and entrails, and burn the said entrails and hearts before the idols, offering that smoke in sacrifice to them. Some of us who have seen this say that it is the most terrible and frightful thing to behold that has ever been seen.

The most valued victims were prisoners of war, particularly those of rank. All prisoners of war were enslaved, and slaves often were offered as sacrifice. Religious parents, like the patriarch Abraham, were willing to offer their own children. It was not uncommon for free men to offer themselves as bloody tribute to the gods. Adults to be sacrificed frequently were drugged so that they went willingly to the altar.

Despite this religious cruelty, all evidence indicates that the Mayas were a peaceful people. Cogolludo speaks of "... wars which because of their ambition they made upon one another . . ." but they seldom made foreign wars. The first invading Spaniards were unmolested until they began to loot temples and to exact tribute at the point of their steel weapons. Once aroused, the Mayas gave their conquerors lusty battle. Bernal Diaz described "... Indian warriors with their banners raised, and with feathered crests and drums." They gave battle to the Spanish troops of Grijalva at the town now known as Champoton. They had a military organization superior to that of the Spaniards, but in long-term warfare they could not match their weapons with those of the conquerors. Maya troops were under the command of two chiefs, named *nacon*, one of whom was chosen for life and the other selected by the warriors for a three-year period. Their squadrons were arranged in regiments of eight thousand men. They carried shields of wattle covered with deer or jaguar hide and wore coats of armor made of quilted cotton. The army which Diaz de-

scribed at Champoton routed the Spanish adventurers in a battle of which Grijalva's men were forewarned:

. . . There came along the coast toward us from the town of Potonchan (as it is called) many squadrons of Indians clad in cotton armor reaching to the knees, and armed with bows and arrows, lances and shields, and swords like two-handed broadswords, and slings and stones and carrying feathered crests as they are accustomed to wear. Their faces were painted black and white and red, and they came in silence straight toward us, as though they came in peace and by signs asked us whether we came from where the sun rose, and we replied that we did come from the direction of the sunrise. . . .

On this occasion the Indians withdrew. Then the next day they attacked and killed over fifty Spaniards. The others escaped to their ships.

The agricultural Mayas were warriors only when the need for defense drew them from the soil, under leadership of their professional soldiers. This was strikingly illustrated after three centuries under the persecution of their Spanish conquerors when, in 1847, they rose in rebellion under Cecilio Chi and Jacinto Pat. Their rebellion began under the orderly rules of civilized warfare, but their white and half-caste enemies set a note of outrage by burning villages and towns, killing peaceful civilians, and raping Maya maidens. It was the last straw to break the restraint of three centuries of oppression. The Mayas proved that they could outdo their conquerors in cruelty and barbarism. For eighteen months a horrible war raged in Yucatan with the Mayas as victors over the entire peninsula save in the capital of Merida. They were about to attack—and very likely to vanquish—the remaining stronghold of oppression when the season for planting the cornfields arrived. The descendants of America's great race of farmers could not ignore the call

of the land even with victory in sight. They deserted the army in hordes to return to their milpas. The cause for which they had fought during a year and a half was lost—but the seeds for the season's crop were in the ground.

The religion of these perennial farmers of pre-Conquest times naturally centered around their four earth gods representing the cardinal points of the compass. They were also deeply dependent upon the rain god whose near relative, the wind god, swept a path for the rain in the tropics. The sky god ruled the sun and the moon. They had a special maize god, young, handsome and vigorous, who was, however, dependent on other gods of climate and weather.

Most of the gods connected with agriculture did not require human sacrifice. Animals, fish, birds, and goods were offered in petition for favors. Since religion was so close to commerce, it is important to note that the produce of the earth was regarded more as a sustainer of life than as a means of profit. Cogolludo wrote: "In food supplies there were no bargains, because they were always fixed at one price, save Maize, which was wont to go up when crops were poor, but it never passed . . . a *real*, or so the load (which is half a Castilian *fanega*)."

During my several visits to Central America I learned that modern Maya Indians practice a religion that is a strange mixture of Christianity and paganism. In Succots, British Honduras, a Maya Indian village with a population of about three hundred and fifty, I witnessed a performance of an ancient Maya rite. "Bringing in the cottonwood tree," as it might be called, is a piece of ritual which ethnologists believe was used to celebrate the arrival of the vernal equinox. The cottonwood tree, or *ceiba*, was to the Mayas, in crude comparison, what the Maypole was to the Anglo-Saxons.

The hundreds of Indians participating in the ceremony did not seem to realize the significance of what they were doing. They knew that they were celebrating the fiesta of Saint Joseph, who is very popular in that neighborhood. But when I asked them the connection between Saint Joseph and the cottonwood tree they had thrust into a hole in the ground before their church, most of them replied that their fathers had used a cottonwood tree for this festival and so they were doing likewise. Others gave a more pathetic explanation. They said that wherever the great Spanish captain, Cortes, had camped in the New World, he had planted a cottonwood tree. (It is true that cottonwoods are found at the sites of most old Spanish towns thereabouts.) To these poor descendants of the first great Americans the planting of the ceiba celebrated the conquest of their ancestors by hired cut-throats and professional looters, who carried the colors of Spain to the New World in the early sixteenth century.

One or two older men of the village alleged that the significance of the cottonwood tree was quite different from the explanations given. It was obvious that they did not want the Catholic priest of the village to know that such theories were entertained in the depths of their aboriginal souls. According to the early Spanish writers, priests often commented on the ease with which the natives of America could be converted. The priests thought that because the Indians were willing to accept the form, they had accepted the substance. The fact was that the astute Americans discovered, very early during the Conquest, that so long as they would erect a cross during their ceremonies they could continue to pronounce their old charms and call upon the names of their old gods without much interference. In the same way it came about that the Indians adopted, with

particular enthusiasm, a Catholic rite that somehow resembled one of their own ceremonies or that was celebrated near the time of one of their own fiestas. As a result, Christianity and the religion of America's noblest pagans have become so mixed that the people who today use the fused product do not know where one ends and the other begins.

The Feast of Saint Joseph is the nineteenth of March. The sun crosses the equator on its way north on the twenty-first of March. It can be imagined, therefore, that the early Mayas found it a natural temptation to incorporate into the fiesta to the Christian saint some of the ritual which they themselves had used for thousands of years to hail the vernal equinox.

La Fiesta de San José which I witnessed had begun on the tenth of March. Booths had been erected on three sides of the square of the village. The horrible modern church, largely built of corrugated tin, filled up most of the fourth side. Raffling wheels spun profitably for their owners all day and all night. Three marimba bands played indefatigably. Much food and drink was sold, especially drink. It was noticeable that all the shops were owned by outsiders, mainly Negroes and mulattoes from the neighboring villages of Benque Viejo and El Cayo. When we reached the party on March eighteenth it appeared that the chief feature of the fiesta was a series of impromptu fist fights between Indians who had been more or less drunk for a week. The fights were squelched with admirable promptness and good humor by the Negro police of the colony. It makes one reflect on the destinies of races to see Indians being controlled by Africans, who are the descendants of the slaves of the Britons, who conquered the Spaniards, who conquered the ancestors of these Indians.

Later that day the Maya Indians gathered under a wide

canopy of palm leaves to dance what is called a *mestizada*, a dance which I had seen Indians perform in Yucatan. It is a sort of two-step shuffle—the men not touching their partners—and is done to the accompaniment of marimba and drum. The men were disappointingly dressed in nondescript European costume: collarless shirt, laceless shoes, and trousers. The women wore small straw hats decorated with paper flowers and the beautiful *huipiles* of their race. The *huipil* is a white garment which hangs from shoulders to knees or lower, and is decorated with excellent native embroidery.

At about eleven o'clock that evening a cottonwood, some twenty feet high, was brought in from the bush by a few men. As soon as they reached the edge of the village they were joined by scores of other men and women until a large procession was making its way about the streets, waving torches and modern electric flashlights in the wake of the sacred tree of the Mayas. At last the leaders stopped before the hole which had been dug in front of the church and the tree was "planted," to wither, of course, a few hours later. Then the dancing was resumed with new intensity. I cannot say "fury" or "abandon" because the Mayas always seem a phlegmatic and pathetic people, a tribe in whose minds lurk resignation and sadness. And they drink with the cold purpose of men determined to forget something.

That night few people slept more than an hour or two in Succots. Dancing was resumed the next morning and was kept up steadily that day and intermittently the following day. A fee of fifty cents was charged each male dancer, which permitted him to dance as long as he could stand. Those who failed to pay promptly and those who otherwise offended against the social order in small ways not meriting the attention of the African constables, were led out of the

dancing enclosure to the shade of the small, sacred cottonwood. There they were forced to pay fines determined by the leader of the dance, a wiry old man with flowers in the band of his felt hat.

This and other esoteric matters were explained to Eric Thompson and me by an old Indian named Cocom. Men by that name were ruling part of Yucatan at the time of the Conquest. It is noticeable that, although the Indians of Succots came from near-by villages in Guatemala some years ago to escape what they considered Guatemalan oppression, they speak a dialect of Maya very similar to that heard in northern Yucatan and Quintana Roo. The chances are that old man Cocom is a lineal descendant of the former aristocracy of Yucatan. He is not even *alcalde* of Succots. But he dares admit that he knows some things told him by his father of the old Maya religion, and shame to any ecclesiastic of modern British Honduras who may try to punish him for that admission.

All along the East Coast of Yucatan I have met modern Indians who use small wooden crosses for worship, but before them they burn the copal incense which their ancestors burned. In the rear of one temple was a typical Maya altar about two feet square and raised about six inches above the level of the floor. Here I found a pile of burned copal incense in the center of the altar. The Mayas burned copal to the Feathered Serpent and to their other gods. Leaning against the back wall of this building, their bases in these ashes, stood two small wooden crosses made not of tree branches but of planed wood.

I have found magnificent Spanish cathedrals, tenanted only by bats and buzzards, in the heart of the thick bush of Quintana Roo. Within a few miles copal was burning in Maya temples, although the hands which brought the offer-

ings had none of the skill that built those temples centuries ago. On the southern border of Mexico, Dr. Spinden found figurines placed on an old Maya altar by modern natives who had made the figurines themselves. In northern Yucatan he found Indians putting out bowls of posol as offerings to the Wind God. Over the bowls they had hung the cross of Christ—little wooden crosses similar to those found in crumbling temples throughout the wide area covered by my expeditions.

If the Pope himself were to try to take apart the religion of the Santa Cruz Indians, he would find it impossible to determine just where perverted forms of Catholicism ended and survivals of paganism began. To a large extent Christ has been accepted, but He has not displaced all of the old gods. These Indians love showy ritual, and when they have found a Christian ceremony that appeals to this side of their nature, they have adopted it willingly. The situation was revealed by General May when I asked him what god he worshipped.

"Christ," he replied.

"But I have seen evidence that your people still keep some of the old Maya religion."

"Oh, yes," the Chief said naively; "we keep the old gods too, in case of doubt."

When General May informed us that he had prevented his warriors from shooting us because we had not taken away anything belonging to the temples, he also issued a warning. He forbade us to visit Huntichmul and Ichmul because the temples were "still being used" for worship. In the course of the interview, he said:

"Every day my people are becoming more accustomed to the ways of the outside world that chews our chicle. My people begin to understand that you archaeologists come to

our shrines in a spirit of reverence and not to steal. Perhaps if you come back next year I can let you see those cities you ask to see."

Two forbidden cities that the Indians "still use" in Quintana Roo hold important and exciting possibilities. There have been rumors of cities in which the old civilization lives on, undisturbed by outside change. As recently as 1842 (recent from an archaeological point of view) John L. Stephens, the explorer, was told by a Spanish padre of a "living city" in the wild district of Vera Paz, Guatemala. Stephens wrote:

The thing that roused us was the padre's assertion that four days on the road to Mexico, on the other side of the great sierra, was a living city, large and populous, occupied by Indians, precisely in the same state as before the discovery of America. He had heard of it many years before at the village of Chajul, and was told by the villagers that from the topmost ridge of the sierra this city was distinctly visible.

He was then young, and with much labor climbed to the naked summit of the sierra from which, at a height of ten or twelve thousand feet, he looked over an immense plain extending to Yucatan and the Gulf of Mexico, and saw at a great distance a large city spread over a great space, and with turrets white and glittering in the sun. The traditionary account of the Indians at Chajul is that no white man has ever reached this city; that the inhabitants speak the Maya language, are aware that a race of strangers has conquered the whole country around, and murder any white man who attempts to enter their territory.

Even if an occupied city did exist in Stephens' time, it might be deserted now, although that part of mountainous Guatemala is still far from railroads and other agents of modern civilization. Stephens' belief in the survival of a sort of "island" of ancient Maya civilization makes fascinating

speculation for the modern archaeologist. But Oliver La Farge discovered the Jacaltecas of Guatemala using the old Maya calendar in 1927. La Farge also found these modern Mayas conducting the same year-day ceremony which Bishop Landa described in *Relacion de las Cosas de Yucatan* and which is included in the ancient Maya book called the *Dresden Codex*. Here is something more than a clue. Here is proof of a relationship between present and ancient Mayas. And in clues and their proof the modern archaeologist finds the satisfaction of the scientist.

PART TWO
THE TAIRONAS

Chapter Ten

COAST OF EL DORADO

IN 1517 THE SPANISH CONQUERORS were looking for gold when they skirted the agricultural country of the Mayas. In 1502, when they had first touched the northeast coast of what is now the Republic of Colombia, they had found gold. It was a principal source of wealth and a medium of craftsmanship of the Tairona Indians, who occupied a section of that coast between about west longitude 73 degrees and west longitude 74 degrees 13 minutes. Their territory included the mountain range known as the Sierra Nevada de Santa Marta, which is independent of the Andes to the southwest.

The Taironas were unconquerable Indians. Moreover, the coast of their country, dangerous even to modern steamships, was itself a protection against the clumsy Spanish caravels which returned again and again over a period of twenty-three years. One expedition of Spaniards after another went into the steep foothills of the Sierra Nevada de Santa Marta and returned defeated. Many of them came to believe that the fabulous El Dorado was in these mountains, whose bare gigantic flanks were hammered by the great swells of the green Atlantic.

Tairona settlements seem never to have been made at a height of more than thirty-two hundred feet above sea level. They all were apparently within a belt not deeper than twenty-five miles along the coast for about eighty-five miles east of Punta Aguja and some forty miles south of it. The generally east-west direction of the Atlantic coast line changes at Punta Aguja to a north-south direction. Five miles south of this coastal elbow the Spaniards founded, in 1525, the first European city in America: Santa Marta, now a settlement of some twenty thousand souls.

With the coming of the Spaniards to Santa Marta, the Taironas withdrew into their mountains. European adventurers, lured by the hope of finding El Dorado, attempted to follow them, only to meet death from thorny jungles, swollen mountain rivers, fever-infested swamps, and poisoned arrows. The conquest of the Taironas never was completed. Subsequent discovery of the great riches of Peru, interior Colombia, and Mexico temporarily diverted Spanish attention from the Tairona country. Many of the conquerors went away in disgust to easier pastures, venting their spleen by calling the Taironas sodomists and other names, as they did with the Araucanians of Chile and other American peoples whom they failed to subdue.

In the latter part of the sixteenth century the Spaniards renewed the campaign against the Taironas. In 1571 they entered Posigueyca, the Tairona capital, and found it deserted. Much of the surrounding country had been abandoned, and nearly all of the tribe had disappeared. Where had the fierce Tairona warriors gone? No one has ever learned.

The late Professor Marshall H. Saville, perhaps our leading authority on ancient American gold work, bought many Tairona gold ornaments from Colombians. He found the

workmanship of those ancient goldsmiths to be as fine as that of any pre-Columbian goldsmiths in America. He never penetrated the true Tairona country himself, but it was at his suggestion that I went into that field to study the most mysterious of early American cultures. My purpose was two-fold. I thought that archaeological investigation might result in determining the place of the Tairona among other American cultures, and that it might produce evidence of such connections as may have existed between the Tairona and other cultures. My friend, Dr. J. Alden Mason, had excavated several Tairona sites for the Field Museum of Chicago in 1923. I hoped to find hitherto unknown sites; if possible one of the six great Tairona cities which the sixteenth-century Spaniards had mentioned. Professor Saville also suggested the advisability of ethnological investigation among the two modern Indian tribes nearest the territory of the Taironas. The first of the two tribes is the Goajiro Indians. The second is the Kagaba, one of three tribes of Chibcha linguistic stock generically misnamed Arhuacos by modern Colombians.

The Goajiros are mentioned specifically by the Spaniards, along with the Chimilas, Caribes, Aurohuacos, Alcoholados, Tupes, and "*aruacos, baburos, itocos, tupes y quenacos.*" Some of these names may be identified, since they are borne by natives living in Colombia today. Other names—Pin-tados for instance—are hard to identify. The Goajiro language is Arawakan. The Tairona language may have been Chibchan, like Kaugian, the language of the Kagabas. That is, both languages may have belonged to the "Arhuacan" group. Caution is needed here, for the name "Arhuacan" itself may have been derived from "Arawakan" by some inept Spaniard. There is neither historical nor philological justification for "Arhuaco," a misnomer which was foisted

upon the world by Piedrahita in 1688, and given additional undeserved prestige by José Nicolas de la Rosa in 1739. The Spaniards were not always careful in description, and even the more accurate clergy seem to have been lamentably deficient in what we call the scientific spirit. Certainly a scientist cannot be a partisan, but these Franciscan and Capuchin monks had no conception of being anything but partisan. Such a book as *Floresta de la Santa Iglesia Catedral de la Ciudad de Santa Marta* tells us much less than it purports to about aboriginal agriculture and much less than its author might have about the Indians of the region. It is preponderantly the usual smug and colorless narration of ecclesiastical rows and vanities and a dull recital of sacerdotal succession.

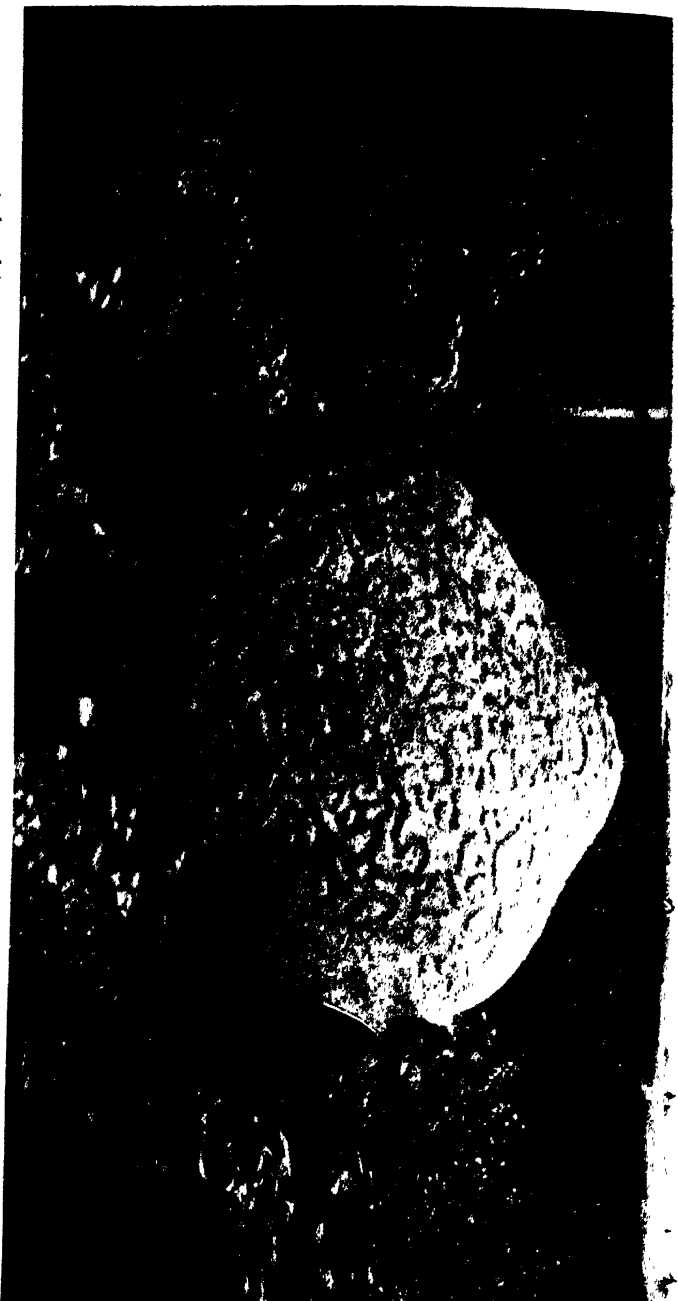
The Auroacos, also often mentioned by the Spanish chroniclers, seem to have been living, at the time of the foundation of Santa Marta in 1525, just where they are living today; that is, on the lower northern and southern slopes of the Sierra Nevada de Santa Marta. About eighty miles east of Santa Marta the range begins flattening down into foothills whose feet rest on the sandy plain which is the Goajira Peninsula. The peninsula might suggest Cape Cod, Massachusetts, or the eastern shore of Maryland to an American. There is little to remind the traveler that he is in the tropics. There are few palms (almost no coconuts), a fauna and flora lacking the vivid color and rich variety which the layman associates with the zone between Capricorn and Cancer.

Gold apparently was there in plenty during the time between the first landing of the Spaniards in 1502 and their entrance into the abandoned Tairona capital, Posigueyca, in 1571. Emeralds also had been reported from this region by Oviedo, a contemporary commentator, Julian, and



(American Museum of Natural History, N. Y. C.)
A Maya altar at Quirigua.

A boulder covered with designs carved by an unknown ancient people in the region occupied by the Taironas in the sixteenth century. Possibly this is Tairona writing.



others. Julian ascribes sapphires, diamonds, and rubies to the Taironas. Obviously, he was mistaken. No sapphires were found in the New World. The disconcerting effect of such careless comment is felt the more poignantly when one turns the pages to find Julian making the important statement that the Tairona capital was a populous city called Posigueyca.

It may be concluded, however, that the Tairona capital was Posigueyca and that the Taironas *did* have gold and emeralds in quantities. Both this ore and this green stone are found frequently in Colombia today.

Certainly it is not necessary to be too skeptical of many early allusions to forges and workshops of the Taironas. The very name Tairona is said to mean "forge." There seems little reason to doubt the statement of Oviedo that the Taironas were highly regarded for their skill in metallurgy by surrounding peoples who are alleged to have come from as far away as Darien to forge their metal. Oviedo (Gonzalo Fernando de Oviedo y Valdes) published his work in the year 1547. In the statement that the capital of the Taironas was Posigueyca he is followed by a later writer, Dr. Don Lucas Fernandez Piedrahita. Oviedo located it in the "Tayro Valley" and alleges that they had other large cities named Tayro (or Taybo) Mongay, Aguaranga, Sinanguez, and Origueyca. Piedrahita follows him again in naming the last four cities.

According to the *Archivo de Indias*, the city of Enlosa with four thousand *bohios* was near Posigueyca. The modern Colombian historian, Ernesto Restrepo Tirado, says that a city called Tayro, and often referred to by the Spaniards as "Pueblo Grande" or "Gran Ciudad," was also near Posigueyca in an "inexpugnable" position on a height. The first Spanish Governor of Santa Marta, Rodrigo de Bastidas,

had had pointed out far off from Tayro the principal source of the gold of the province. The only smelter was said to be at Tayro. Here was *mucho oro* says Oviedo, who distinctly speaks of many gold mines.

Julian says that the "Tayronas" not only had their own gold mines but controlled peoples owning what later became known as the mines of the Choco, Antioquia, and Pamplona. Julian says: "They had on the slopes of the hill of Tayrona the forging of and the smelting of the metals and workshops for the working of jewels of divers figures."

It may be well to note here that Julian mentioned Tayrona *silversmiths*. The underemphasis of silver is a curious feature of pre-Columbian history. If jade is more popular than emerald because it is more workable, if gold is popular because it suggests sunlight and perhaps also because it is easily workable, what of silver? It is workable. Is it moonlight? Is it moonlight on white limestone?

As to other minerals, Julian mentions diamonds, topazes, amethysts and rubies and quotes Piedrahita (Lib. 3, C.1) to the effect that the Taironas had quarries of jasper, porphyry, and marble. I found beads of jasper, but I have seen no evidence that anyone has found marble in the Tairona area. It is an amazingly rich field, geologically speaking, as it is zoologically. The fauna of the Sierra Nevada de Santa Marta is quite distinct from that of the Andes.

Professor Saville thought that some descendants of the Taironas still might be living in the region of Santa Marta. There is not a Spanish ruin to be seen now for seventy-five miles east of Santa Marta, although that coast of El Dorado abounds in stone roads and stone bridges of the Taironas and in rings of beautifully cut stone which were the foundations of their sacred houses and temples. The most likely

race of descendants from somatological evidence seems, perhaps, to be the Goajiros. They are muscular, warlike, active, and are of about the same skin color as the Taironas, if we may rely on the statements of the early Spanish commentators.

Chapter Eleven

THE GOAJIROS

THE GOAJIRO INDIANS OF Colombia present the curious spectacle of men, naked but for breech clouts, hunting deer with bows and arrows in Ford cars.

I had an experience in the Goajira Peninsula which all civilized men have dreamed of having. It was the experience of going naked among naked men and women.

I had gone first among the Goajiros to begin the ethnological part of my program because they are the people most like the Spanish descriptions of the Taironas. They still have poisoned arrows which produce effects very similar to the arrows of the Taironas. They are said to have been cannibals, a charge also made against the Taironas. Now, cannibalism and the use of poisoned arrows are two of the culture traits of the Caribs, one of the great Indian stocks of South America. When the white men arrived they found that the Caribs, one of the few pre-Columbian American tribes to use sailboats, had driven the less warlike and shorter Arawaks out of Eastern South America into the islands of the West Indies and were following them into new territory, butchering and eating them.

The Goajiro language is Arawakan. It seemed, therefore, as I set out on my trip, that the Goajiros were probably descended from Arawaks, driven north from the region of the Guianas to be conquered by pursuing Caribs. The conquerors, having left them some Carib culture traits—including the pleasant ones just noted—had then gone on their way. Might it not be that the path of these Caribs led on to that "Coast of El Dorado," west of the Goajiro country and just east of Santa Marta? Were the Spaniards accurate, for once, when they called the Taironas Caribs?

It was my duty, as an anthropologist, to approach this question with an open mind. At the same time it was necessary to consider the important findings of other anthropologists. Dr. J. Alden Mason and others had reported that the Goajiros know enough about the Taironas to make periodic visits to their graves and plunder them of gold ornaments. Even if they did not prove to be descended from the Taironas, the Goajiros might throw some light on the nature of the culture, or even on the fate, of the mysteriously vanished metallurgists of northern Colombia.

From Santa Marta I took a schooner to the port of Rio Hacha, at the edge of the Goajiro country. Here I spent several days measuring natives in the villages of Union and Pancho and in small ranchos back of Rio Hacha. They are the most mercenary Indians I ever have met and would not permit themselves either to be measured or photographed unless I gave them a small tip. I was also very busy making a collection of Goajiro ethnology. These Indians are as energetic fishermen on the coast as they are valiant cowboys inland. I acquired harpoons, as well as large water jars, gourd spoons, sieves and other utensils, necklaces and bracelets of seeds or coconut husks, coconut rings and, above all, dyed textiles, which are very beautiful. Their hammocks of

dyed cotton are famous. So are their cotton ornaments for the heads of horses. Their scarves or waistbands to which is attached the *guayuco*, or loin cloth, are all the men wear in their own villages. When they enter Rio Hacha they are required to put on a hideous garment, something like the Mother Hubbards their women wear at all times. Both men and women are so beautifully built that it seems a shame to have their physical splendor hidden by these ugly garments.

I met several intelligent Colombians who were interested in the Indians. One was a gentleman of mixed Dutch-and-Goajiro blood who is highly regarded by the Goajiros. Another was a circuit judge of Colombia, Señor Rafael Lafaurie. He introduced me to a friend of his who owned a Ford and the three of us made plans to drive into the interior of the peninsula.

We started about four o'clock in the morning. It was sunrise when we came to a big sheep and goat encampment. The Goajiros are great stock raisers. They are nomads, and follow their stock wherever it goes, like Wall Street brokers. These Indians are very hospitable, and offered us small cups of coffee, in the Spanish manner. They were clad only in *guayucos* and face paint made of *marua*, a rotten wood, which they wear to prevent sunburn (sic!).

We went on, spinning through the sand at a furious pace. At noon we reached a large settlement called Macao. It is a permanent settlement, the center of a good deal of trading. We were greeted by a man who was no darker than a lot of golf players in California, and who wore clothing which looked like the sack coat of a New York investment banker above the kilt of a Scotchman. It was hard for me to believe that he was a Chief of the Goajiros, but he was. I was beginning to realize that the Goajiros choose their

chiefs partly for their wealth, for they are, perhaps, the only people in the world who are more materialistic than the Americans and the Scotch.

The Chief led us across some fields to a large isolated Goajiro hut, which consisted of a thatched roof on poles and measured about thirty feet to a side. No walls are necessary in that climate. The Goajiro husband borrowed my gamegetter and went out and began to shoot .22-caliber bullets at empty bottles. Some of his friends arrived and released a few arrows at the same targets. The rich Goajiros own rifles and shotguns for hunting and war, but the hoi polloi still use bows, and are very expert with them.

One of the arrows which this particular group was firing attracted my attention instantly because it made a whistling noise as it went through the air. They explained that this arrow was specially designed for shooting *pushaina*, the small wild pig, or peccary. If a hunter starts up a herd of wild pigs, and whistles, the pigs will stop in mid-gallop. If he shoots a whistling arrow, then they will remain stationary until the arrow reaches its mark. The whistling sound is made by the air striking a hole in a small nodule of hard gum, which is fastened to the arrow just above the base of the metal point.

I was pretty excited about this arrow, and determined to buy it, but I tried to hide my enthusiasm because already I knew what hard bargains the Goajiros drove and that any sign of interest in an object would be sure to put up its price. Finally, I got the whistling arrow for about two cents, by buying thirty or forty other arrows and a dozen bows with it. So far as I have been able to learn, whistling arrows are known to have been used in only two other parts of the world. A tribe in the Guianas, further south in South America, used them recently and may be using them today. They

were used in ancient times in Japan. The use of whistling arrows in the Goajira may be considered more evidence supporting the theory that the Goajiros are an Arawakan people who came north from the region of the Guianas.

I was more than delighted with the whistling arrow, but what I wanted most of all was one of the Goajiros' famous poisoned arrows. The Spaniards have left us accounts of the effects of poisoned arrows on their own soldiers. Some of the poisoned arrows were shot from the bows of the early Goajiros, and some of them were fired by the mysterious Taironas. The poison of both kinds of arrows seems to have had much the same effect. In both cases it produced intense nervous excitation with muscular cramps.

"They jumped in agony" or "they danced . . . in the throes of utmost torture." These are common phrases from the pens of the early Spanish commentators describing the effects of Indian poison on their Castilian men-at-arms. Mr. Samuel Webber, a rich and intelligent resident of Rio Hacha, told me that such symptoms are characteristic of the effects of Goajiro arrow poison today.

The point used for the Goajiro poisoned arrow is the ray of the ocean fish known as stingray. (The same point was used for the Tairona poisoned arrow.) It is a piece of pale-yellow bone, about six inches long, with saw-tooth edges. When not in use the arrow tip is kept covered with a cap made of cane. The Indians say this point is used both "because it holds the poison well," and because it makes a nasty little jagged wound which gives the venom plenty of openings into which to filter. The Goajiros have given various explanations of the poison they use. They gave me the same explanation that they gave Simons in 1885, and James Hawkins in 1923. They said that the poison is made of putrefied snakes, toads, and other reptiles. The snakes are

not poisonous, being of the boa constrictor family, and must be gathered in the hills of the interior.

In 1933, at the United Fruit Company Serpenterium at Lancetilla, Honduras, Dean Howard Edwin Enders of Purdue University School of Science told me it was his opinion that the Goajiro arrow poison came from certain glands in toads. If this is true, the Goajiros may have been telling substantially the truth when they said that they used the putrefied bodies of toads, frogs, and snakes.

Two Scandinavian scientists, G. Thorell and C. G. Santeson, analyzed the Goajiro arrow poison. They found that, in many cases, it produced tetanus in the victim. One symptom of tetanus is the victim's compulsion to jump and to tear at himself, which tallies exactly with the symptom described by the early Spanish historians.

The poison is weak when it is new, Indians at Manauri told me, and becomes so weak again in nine months that it must be renewed. A man shot by a Goajiro poisoned arrow does not die immediately.* This was true of the Spanish soldiers shot by Tairona arrows. They would go right on fighting, perhaps killing several Indians. But from three to twelve days later they would be taken violently sick, and death was always pretty sure unless the ray had been pulled out promptly and the wound very well cauterized. Even then, death often ensued. A special patience must be necessary for this type of fighting. You impregnate your enemies with poison. You have the dramatic and secret knowledge that they will die in a few days and that you will inherit the field of battle, if, in the meantime, they do not kill you with more abrupt weapons.

* Needless to say, Goajiro arrow poison should not be confused with curare, which is made of plants containing strychnine and kills a man in a few seconds.

The Spaniards relate that the Indians used arrows headed with the very hard wood of the macana palm and capable of inflicting immediate death, as well as the venom-tipped missiles. This raises some interesting questions. What percentage of an Indian army was equipped with weapons for inflicting cruelly delayed death, and what percentage carried weapons which could be used to incapacitate soldiers at once? Is an enemy wounded enough to be put out of action on the field but destined for ultimate recovery worth more to his opponents than one doomed to die in a few days but capable of killing many men in the meantime? If we consider that the Spaniards were invaders, operating far from their base and with no females of their own to increase their race, the death of one Spaniard three days after a battle might have been worth the death of three Indians in that battle to the aborigines. But it is doubtful if the Indians figured this out. Their poison had been invented to fight their own red-skinned enemies. Yet here, again, the ultimate ownership of farms and hunting and fishing grounds is what counts to a nation. That is why we may say fairly that the Chinese nation—the least patriotic nation in the world—is the most intelligent.

The Chinese do not care what flag flies over them so long as they are free to cultivate the land beneath it. International warfare is based largely on fear, which is the same thing as ignorance. A man who has lived in many countries of the world, and found all those ways of living good, is not likely to think it worth while risking life itself to maintain the particular mode of living into which he was born by his mother's chance residence.

The Goajiros live nominally under Colombian control, but they care nothing about flags and patriotism. They take what they want of white culture—Fords and rifles, when

they are rich—but they reject the rest and they use that which they take in their own way. Hence, you see arrows as well as bullets fired from automobiles.

Goajiro arrows are three to four feet long, and they would make a European archer look askance. The shaft is usually made of wild cane, a very soft, light wood with a pithy center, a weak material for an arrow shaft. The tip is about four and three-fourths inches long, whether a poisoned bone point or a spike or other metal point. War arrows and arrows for hunting big game are tipped with a variety of murderous material. A bit of a hoe or a piece of almost any steel implement, sharpened and provided with saw teeth and hooks to make tearing it out of a wound a fairly fatal procedure, is a favorite arrow point. Large spikes are also in common use. They are set in the base of an empty brass rifle cartridge. (There is irony in the fact that used ammunition of a modern weapon serves as equipment for one of the oldest kinds of ammunition.)

The arrows for hunting birds are sometimes tipped with these same cartridges, end foremost; or, they are tipped with a little knob of hard wood. Such arrow heads merely stun the game and knock it out of the tree. They have the merit of not sticking to the tree as a pointed arrow would—in which case the recovery of the missile might be difficult.

Another interesting feature of Goajiro arrows is that they have no feathers on them. You might think that this would make their flight wobbly and untrue, but it does not. Because it is featherless, the Goajiro arrow is released between the first and the second fingers, instead of over the thumb—the tertiary release, which is a modification of the primary release. The tips of the second and third fingers rest on the string and aid a bit in the pulling.

There is nothing in the descriptions of battles between

Taironas and Spaniards which have come from the early chroniclers to throw any light on the arrow release used by the Taironas. Those students who find any interest in the opinion of Mr. Philip Ainsworth Means and of myself, that the Taironas were Caribs, may note that Wissler attributes the tertiary release to the Caribs.

The Goajiro bows are about five feet nine inches in length, and are made of various hardwoods. The bow is wrapped with cord at the middle to give a better grip, and bow guards of hide and fiber are worn on the left wrist to protect the shooter against the heavy bowstring of agave fiber.

The heaviness of the heads of their steel-tipped hunting arrows and the lightness of the shaft makes the Goajiro arrow "heft up" and balance more like a javelin than an arrow. As a matter of fact, the Indians do not shoot these arrows with a flat trajectory, in the manner of our own and European archers, but fire them with a good deal of altitude and drop, as a howitzer loops its shells. Not very much force is required to drive one of these long steel points with double razor edge between a man's ribs.

The Goajiros are very fond of ambushing enemies and potting them from the rear. The traveler in the Goajira Peninsula does well to walk softly, courteously, without display of wealth and, whenever possible, to avoid clumps of bushes. The country is full of bushes and low, scrubby trees.

Anglo-Saxons have been raised in the tradition that a man who sneaks up on a foe and kills him from behind is a coward and a bad soldier. This delusion hampered our ancestors in battle with Iroquois and Shawnee. The Goajiro, like those two North American tribes, is as brave as a lion. But he takes every advantage he can get.

Today, the best poison makers in the Goajira Peninsula

are the Cocinas, of the remote eastern Yunipiche region. The Cocinas are not a caste. This is simply a nickname applied to the toughest regional group in the whole Goajiro nation, which today numbers only about twenty-five thousand. Simons declared it had never numbered more than eighty thousand. These figures, however, refer to pure-blooded Indians. Modern evidence does not indicate that Goajiro blood is becoming less in quantity; it is merely mixing with the blood of other races. The Goajiros, for some years now, have been intermarrying increasingly with other races—with Dutchmen, Frenchmen, Englishmen, and Colombians. The last term, in these coastal regions, means persons with a good deal of Negro blood. Goajiros seem to be especially adapted to intermarrying with Negroes, or persons of part Negro descent, and yet maintaining the Indian strain as the dominant one. The Goajiros are the only Indians I have met who seem to be more than able to hold their own against the African infiltration. Nine times out of ten the child of a Goajiro or a Goajira and a black or a white adheres to the Indian language and culture. Goajiros have the same sort of bouncing physical vitality which characterizes many Negroes.

I found many of the Goajiro traits very surprising. For instance, here is a belligerent, greedy people who are very kind to animals and extremely soft-hearted toward their own women. If a Goajira woman is traveling with you, you are absolutely safe anywhere in the peninsula so long as you behave properly toward other men's women. The Goajiro attitude toward women is, however, more like the attitude of modern Russia than that of the United States. Women are treated as equals and are protected, but they are allowed to carry the burdens. They are not spoiled as we spoil them and they do not, as with us, dominate the na-

tional culture. The women bob their hair and men do the barbering. The Goajira woman follows behind her man on the trail. A Goajira woman may go all over the peninsula alone with entire safety. There may be a good deal of marital infidelity, as the Colombians are fond of saying, but there is no rape. It is a matriarchal and rather feminist society but not an emasculated one, by any means.

Perhaps the chief vice of the Goajiros is their drinking. Simons estimated that one-quarter of the deaths on the peninsula were caused by drinking. He attributes another quarter of the mortality to the murders of caste warfares. As compensation for a murder, he reports the payment of eight sheep, two oxen, one horse, two carnelian necklaces and two sirapos (girdles) of black beads. This payment was repeated six months later.

The Indians of Macao who had been selling me their bows and arrows became very much interested in my gamegetter. This little weapon has been worth its weight in gold to me because it has attracted the attention of the members of Indian tribes I have visited. The fact that it is both a shotgun and a rifle makes it a miracle to them. (It is also a pistol, when you take the stock off.) They are also amazed that it can hit so hard, for so small an arm. After they had showed me their method of shooting the bow and arrow, they asked if they might shoot with the gamegetter. They used the .22-caliber rifle barrel and perforated a few stumps. Then one Indian, seeing a turkey buzzard alighting on a tree, begged the privilege of taking the gun and going after the buzzard. Unfortunately, he forgot that the shotgun barrel also was loaded, and in walking he must have dropped the hammer from the higher level of the rifle barrel to the lower level of the shotgun barrel. At any rate, all I know is that while I was listening to an old Indian tell me about

the caste system, I was interrupted by the noise of a shot. Then came a tremendous yell of anguish. The Goajiro with the gamegetter had shot off his big toe.

I made a tourniquet of the string with which I cleaned the gun, and tied it around his ankle, probably in the wrong place. Then I went through hell with the relatives of the wounded man, because this accident brought me smack up against the strong Goajiro caste system. The whole tribe is divided into castes, of which there are about twenty. Membership in castes follows the woman line, and the point of view now was that I had shed the blood of this Indian's mother's caste by lending him my gun. If it had been his own gun, he would have had to pay compensation—"tear money," it is called—to his mother's caste. As it was, the payment of "tear money" was up to me. After six hours of arguing over chicha, a drink made of corn and fermented human saliva, I paid the caste of this Indian's mother thirty-six dollars in cash, two goats (one of them knock-kneed), and six necklaces of modern glass beads made in Belgium.

It is noteworthy that Goajiros consider all white people as members of one caste. If you suddenly find an arrow through your ribs, you are not necessarily the victim of robbery or wanton murder. You simply may be suffering revenge for the fact that some other white man's Ford ran over an Indian fifty miles away last week. A pleasant country to live in, and full of surprises!

From Macao we returned to Rio Hacha via Manaui and other points on the coast. At every village I bought necklaces of coconut or carnelian, some with gold pendants from Tairona graves; I also bought coconut rings, straw head bands adorned with feathers, flutes, and especially sashes (*sira*). And I measured the heads, faces, noses, and stature of the natives. Only twenty-two of their women and twenty-

nine of their men were willing to be measured. No one had gathered such data before me, however, so the measurements of stature, heads, faces, and noses seemed worth obtaining.

Despite the splendid physique of both Goajiro men and women, they are not really tall. The average stature of the men I measured is about five feet two and a half inches.

The Goajiros are brachycephalic, with an average cephalic index of 84.4 for both men and women. The only six Tairona crania which I found in a sufficient state of preservation to measure proved to be upper mesocranial, with an average index of 79.8. (The system of computation which I use was taught me by Dr. Bruno Oettking at Columbia University.) These Tairona skulls were secured from the Indian cemeteries at San Pedro Alejandrino, Gairaca Bay, and Pozos Colorados.

The Goajiros did not like being measured. At some villages I had to pay each of them five cents to overcome their prejudice. As I finished with each individual the group around would cry: "*Plata, plata,*" and chuckle and laugh gloatingly as I paid out the silver coins. The only interest these vigorous, egotistical Indians have is in making money. They have far less curiosity about their past and far less interest in their ancestors than most Indians. They think it only natural that they should be interested in Tairona gold, or any gold; but they could not be expected to care about such an abstract form of culture as racial history. The knowledge we have about the Taironas indicates that, in this respect, they were quite different. The small amount of Tairona genealogy which the Kagabas gave to Preuss and to me showed a strong concern with dynastic matters.

I came to the conclusion that the Goajiros are not descended from the Taironas, even though they are possessed



The Goajiros, clad only in breechclouts, hunt deer with bows and arrows in Ford cars.



Amutsh, who was willing to sell herself as a wife to the author
for four cows and eight goats.

of enough information to make expeditions for the purpose of looting Tairona graves.

I had fallen into the habit of walking over to Calancala beach from Rio Hacha. The beach is at the mouth of the Rio Calancala. The Indians go to Calancala beach to fill their water jars, bathe themselves, and wash their clothes, in the order named. The Colombians go there to take surreptitious looks at bathing Indian women, who always try to hide themselves under overhanging bushes, or to exhibit their own virile charms. The Goajiro men resent this attitude of the low class, mulatto Colombians, and who would blame them? More than once I thought there was going to be a fight, and determined that, if so, my shotgun and gamegetter would be working for the Indians against the Colombians. It is only fair to Colombia to say that this element is comparable to the one found loafing around garages and saloons in the United States.

Fortunately for me, there was no fight. Otherwise, I still might be living in the Goajira Peninsula, unless I could have escaped via Venezuela. That would have been all very well as a plot for fiction, but not so good in real life.

The Goajiro men have a very fixed idea about male modesty. Ordinarily, they wear only the guayuco, an abbreviated loin cloth; but they feel, on occasions like bathing, that they are modestly accoutred without even a fig leaf, so long as they tuck the end of the penis between the testicles and the left thigh. It is significant to anthropologists that these Indians consider the penis more to be hidden than the testicles.

At any rate, I grew to have a great respect for these Indians, walking about in the curious, close-legged manner demanded by modesty, while the half-Negro Colombians displayed themselves with boyish pride. Occasionally, while

I was swimming, a new group of Indians would come along, and I would go and measure their stature, heads, and bizygomatic breadth, and to determine their nasal indices. Some of them had been fishing or swimming and were nude. Others were returning from trading in Rio Hacha and were slightly clothed. At such times I tried to emulate the Goajiro method of modest body regulation. It may seem peculiar—maybe it was—but I was amused at being naked, and measuring naked Indians with delicate steel instruments created by the elaborate civilization of Germans in complicated clothes. (All the best instruments for anthropometry are manufactured by Teutons.) After a few days of this, my clothes felt like armor when I put them on. Man is a curious animal. If we must wear clothes, perhaps it is highly intelligent to keep changing the fashions, and to make garments as unsuited to the body as possible—like trousers, for instance, which are certainly unsuited to *male* bodies—for clothes are nothing but ornaments and superstitions. They were adopted fully as much for ornamental and magical reasons as the crescentic golden nose ornaments found in Tairona graves.

When I was not engaged in measuring Indians on the beach I was always interested in watching the canoes being towed upwind. The easterly trade winds blow down the beach, toward Santa Marta, so that practically every day the Goajiros have a fair wind in that direction. When they return they unstep their masts, and one Indian takes a long tow line over his shoulder and walks up the beach, while another sits in the stern of the canoe and steers. They think little of covering fifteen or twenty miles a day in this fashion. I explained to them how they could put centerboards or leeboards in their canoes and beat upwind, but they were not interested.

There is a sandbar that connects the beaches at the opposite sides of the Rio Calanala. It is in a crescent shape, with the bulge far off shore. Wading outward along this sandbar, with the water just under her beautiful breasts, I saw a young woman who made me consider Judge Lafaurie's constant urging that I should get a Goajira wife as a means of studying the matrimonial customs of the tribe. I had been thinking of it seriously, for reasons of research.

As we have seen, the Goajiros have a matriarchal society. Although the men often have several wives, each wife lives in her own house and is very independent. As a matter of fact, the women handle most of the business, are very good traders, and often support their shared husband. There are about an equal number of each sex, and this means that a good many women have secret amours. I do not know how. It seems to be a very delicate matter. (As an anthropologist, I have been trained never to have an amour with an Indian woman, for this sort of affair has disrupted many an expedition and resulted in the death of many an explorer. Indian men are as jealous as any.) But the Goajiro men are very fond of saying: "Who can be sure of his own child?"

It seems quite logical to them that a man has very little to say about his own children. His children are under the control of his wife's oldest brother. The man, on the other hand, has a great deal to say about his sister's children. He knows that they are related to him. Much the same system is in effect among the Pueblo Indians of our own Southwest, and in several other parts of the world.

The woman for whom I took a fancy turned out to be a married woman. However, that didn't make any difference. Goajiro husbands often will sell their wives, especially if they get a bigger price than they paid for them. As some of the cattle paid for a wife may be killed for a feast, all rela-

tives and friends of the bride like to see a prospective husband pay a big price.

While we were dickering with this woman's husband, who turned out to be a mulatto—part white, part black, with a dash of Indian—a group of Indians came along. I naturally wanted to measure their stature, heads, and faces. I laid down my double-barreled shotgun, which was not loaded, but which I had brought along on the chance of collecting a rare species of ibis, up the river. A little later, I unstrapped my gamegetter and laid it in the sand in order to be less encumbered while working. As I did so, I noticed that an Indian had my shotgun. I thought nothing of it until I saw another Indian reach for my gamegetter, which was loaded. I reached for it also, but my Negro assistant was quicker. He got it. Then he said to me in low, earnest English:

"Let's get out of here. One of those Indians just said: 'He's got a lot of money. Let's kill him and take it.'"

We went away for about a hundred yards and waited a few minutes, then strolled back. I was clutching the shotgun, now loaded, and had the gamegetter strapped to my waist. That particular group of Indians moved off, but the mulatto and his beautiful wife remained.

The mulatto husband went by the Goajiro name of Bulik (burro or donkey). He was good-looking in a formal way, the way of Fujiyama, which is an overtrained mountain.

"I want to buy your wife, the one who just came across the sandbar," I told him.

"Bueno (all right)," he answered. "You must see her uncle, Hatuk (War Arrow). He lives in that rancho just back of Rio Hacha. You can see him tomorrow morning."

It is the Goajiro custom to buy your wife from her

oldest maternal uncle, not from her father. In case she is married already, her uncle still has to be consulted, because if she is sold he will have to return to her husband the price the latter originally paid for her. If the new buyer is a foreigner, the uncle and the first husband try to get a bigger price than that first paid for the woman, and split the excess profit between them. I had heard about the practical applications of all these things from Judge Lafaurie and from a Dutch trader. I had heard other things. If a wife is unfaithful, the husband will get back from the uncle the price he paid for her. On the other hand, if she dies in childbirth, the husband will have to pay the uncle the sum of the original purchase all over again. If the uncle is unable to refund the money when a wife has been untrue, it is his duty to help the husband get it from the seducer, using force if necessary. The uncle and the husband also get "tear" or compensation money from the brother-in-law of the guilty man. The father has some responsibility with the uncle in these matters, but the degree of the father's influence varies in different parts of the Goajira Peninsula. When a husband dies, one of his brothers, generally his youngest brother, inherits his widow.

The next morning I went to the rancho, which was only half a mile back of Rio Hacha, and called at the house of Bulik. Hatuk, a small, broad man whose face was pitted by smallpox, came out. He was wearing a white *tashe* (man's robe) around his waist. The woman, who was called Amutsch (Water Jar) followed him in a new black *tashen*, the more voluminous robe of the Goajira women. She seemed larger and more placid than she had seemed crossing the sandbar in her natural state. She wore a necklace of black octagons of coconut alternating with cylindrical carnelian beads from graves of the extinct Taironas. (The

Goajiro name for bead is *tailihan*.) She had sandals on her feet. They are called *sapat*, a word so obviously derived from the Spanish *zapata* that it suggests that the Goajiros originally went barefoot, as do the near-by Kagabas.

There was an interminable amount of negotiating about the price of the woman. She sat silently through it all, weaving a hammock. The dyes for these hammocks are made from the leaves or wood of various shrubs or trees, except the black dye, which is made from a mushroom called *mashuka*.

"What does she think about marrying me?" I said suddenly to War Arrow.

He spoke some quick, jumbled Goajiro to the woman. She answered him in about three words.

"She says she would like very much to marry you," said Hatuk. "She says she thinks you would give her some very strong children."

War Arrow and Donkey laughed uproariously. Up to now, as I had learned by previous discreet inquiry, Amutsch had produced no children.

Four Goajiros appeared from around the corner of the house. One was Bulik. The nicknames of the other three were Tshakuts (black), Waikai (fruit-grabber, a long wooden instrument like a trident with which the Goajiros get fruit off trees), and Hawapi (a root which fattens persons who eat it). The last was the older brother of Amutsch; the other two were friends of Bulik.

Hatuk was a natural salesman.

"She is beautiful, just the way you Dutchmen think a woman is beautiful. I mean, she has large beautiful breasts," he said. (I am somewhat blond, and the Goajiros think that any blond white man is a Dutchman, because the Goajira

Peninsula is full of Dutch traders who come over from the island of Curaçao.)

"Why should you think that large breasts are necessarily beautiful?" I asked him.

"The better to nurse their children," he answered, as if there were nothing more to say.

A number of other Goajiros began to gather around us from near-by huts. They were intensely interested in the negotiations, particularly a repulsive, dirty old hag who was all skin and bones, and cross-eyed. I was informed that she was the grandmother of Amutsch. She was firmly supported in her argument by a buxom, flat-faced woman of about thirty, Amutsch's sister. The latter was addressed as Kataot, which means "bag."

Bulik began by asking the tremendous price of ten cows. You might have to pay that for a Chief's daughter, but it certainly was exorbitant for a commoner like Amutsch.

I offered ten goats (the equivalent of one cow).

Bulik sneered. "If you want a goat woman, there's one you can buy." He pointed to the old cross-eyed hag, his wife's grandmother.

There was a big laugh all around, in which the grandmother joined heartily.

Bulik gradually came down in his price, to the disgust of Hatuk; and after two hours of wrangling, we settled on four cows and eight goats.

I went back to the hotel in Rio Hacha, very tired. Soon, I became scared. My Colombian friends around the hotel began teasing me with the suggestion that if I bought a Goajira wife I would have great difficulty ever leaving the peninsula. I had never wanted Amutsch much, anyway. I had been led on by a zeal to discover the ritual of wife buying. I had learned very little, for these Indians near Rio

Hacha had sloughed off much of their ancient way of living, and had added the white man's mercenary spirit to their own native love of bargaining. The transaction for the heart and hand of Amutsch had been little different from the many transactions I had made already to secure beads or knitted bags for the two museums in the United States.

One of my friends, the Dutch trader, who happened to know Bulik well, suggested a way out. He would go and tell the commercial husband that I had received a cable suddenly calling me back to the United States. Therefore, the bargain was off. To show my regret, and as evidence of my previous good faith, I would present Bulik with five goats. Also, I promised that if the Indians would put on one of their characteristic circular dances and give me a certain hammock I had been coveting, I would contribute two gallons of native white rum for the occasion.

This suggestion relieved my embarrassment and met with the hearty approval of the Colombian blades around the hotel. It was put into effect at once by the gentleman who had suggested it. He asked me not to mention his name in writing, because he had an affiliation with some missionary society, and did not wish to embarrass that organization.

Within an hour I had paid the goats to Bulik, and within three hours the dance began.

There was not much to it, except that men and women lined up alternately in a ring. Instead of going in opposite directions, as in our dance called the Paul Jones, they moved in the same direction to the rhythm of the drum. They moved in a sort of shuffling gait, not really lifting their feet off the ground. Each woman tried to overtake the man ahead of her. He (presumably) tried to avoid being overtaken. The rules are that if a woman overtakes a man, she shall try to trip him. If she succeeds in this endeavor,

he must have sexual intercourse with her. Scientists seem to disagree as to whether this must take place immediately, or whether it may be deferred. At this particular dance the rule was that the payment of the penalty by the men might be deferred twenty-four hours.

I asked some Indians what would happen to a man who refused to pay the penalty to a woman who had tripped him.

They looked surprised. Such a thing never had happened, they said.

"Oh, yes. Once that happened," an old man remarked. "A man in my country, when I was a boy, refused, because he knew the woman was sick. But no one else knew that. So they punished him badly. The women got hold of him and mutilated him; cut him in a special way, you know."

All the Goajiros laughed. The whites of their eyes glistened.

"That wouldn't happen nowadays?"

The old man looked thoughtful.

"You never can tell what women will do," he said.

The Dutch trader who was my friend drew me aside. He had attended such a dance some years before, he said, and when a man was tripped and had dropped out of the line to go to the rum gourds with the girl who had conquered him, someone yelled:

"Put the Dutchman in his place."

The Dutchman took his place, and was tripped by a hag somewhat like the grandmother of Bulik's wife. Having no stomach for fulfilling the contract, he ignored it, only to face a barrage of mud and cow dung the moment he left his hotel. Fortunately, he managed to get away from the village by automobile, escaping, he believed, what might have been serious injury.

I was feeling more and more uncomfortable. Bulik, present at the dance which I had provided, was flinging me dirty looks after each swig from the rum gourd. I had an uneasy conviction that my experiment with Goajiro marriage barter might not be at an end. One of my Colombian friends suggested that I hurry back to the hotel, and he walked there with me.

It happened that a dirty, converted United States submarine chaser was in port. She was called the *Expreso Maritimo*, and she was considered to offer de luxe travel to Santa Marta from Rio Hacha. She was supposed to sail at noon the next day.

With the help of a small bribe to the Customs officer, I went aboard her at 10 A.M. Even so, I got several derisive looks from Goajira fishwives around the market near the Customs House, and a clot of mud in the back.

Another small bribe persuaded the skipper of the *Expreso Maritimo* to sail on time—an event that had never happened before and, doubtless, has never happened since.

Chapter Twelve

GAIRACA RUINS

WE WERE GOING TO BEGIN archaeological exploration of the Tairona country by digging on the coast near Santa Marta. After that we were going up into the Sierra Nevada de Santa Marta on a difficult quest. I hoped to buy one of the old wooden masks which the Kagaba Indians of the forbidding mountains regard as gods and guard very jealously. The masks came to them, perhaps, from the Taironas.

James Hawkins, a mulatto who a few years before had been guide and general assistant to Alden Mason, the anthropologist, was to be my foreman. He had met me in Santa Marta, Colombia, before my visit to the Goajiros. He could not go with me then because he had to cut sugar cane on his farm, but he promised to be ready when I returned from the Goajiros.

"My father was an English army officer. My mother was a black woman from Jamaica," James Hawkins told me, over a *copita* of cane rum.

At first I thought he meant that his father had been a member of a colored regiment. I could not believe that a pure white English army officer would marry a coal black

woman, even in Jamaica, although it was obvious that Hawkins himself was not pure Negro. I did not like to come out bluntly and ask him the specific question. In the presence of a mulatto I am always a little wary of stepping too heavily into a discussion of race. The thing finally came out quite naturally. One day Hawkins himself referred to his father as a "white man" whose English relatives Hawkins regretted he could never know, and I got a clean-cut explanation.

When I met Hawkins, my first impression was of his gold teeth. (They are considered extremely smart in that country.) After my eyes had grown accustomed to the golden glow, I saw behind it a nice, quiet, smallish man, who seemed reliable, intelligent, and rather melancholy—impressions which were to be confirmed constantly.

Hawkins is one of the finest men I have ever known. His father must have been, too, and his mother must be a fine woman. She is still living in Jamaica. His father died quite awhile ago, of delirium tremens, I gathered; or of some related affliction. Naturally, the father had to resign from his regiment when he married the black woman. He gradually gave up his white friends, and drew into himself. He had always been something of a drinker. Now he became worse. Hawkins told me that as a boy he had been afraid of his father. The old man would lock himself up in his den and drink for days at a time. The other children were afraid of him, too. There were six or seven of them. "At these times, only my mother could manage him," Hawkins said. "She would go into his room and calm him."

I have heard Hawkins talk to ignorant Colombians about New York and I thought he must have spent ten years there. The fact is that he never has been there, nor in any part of the United States. But he is an avid reader, despite

the fact that he has very bad eyes and wears spectacles which he bought for forty cents in the public market at Cartagena. He has acquired quite an accurate idea of the state of spiritual culture in the United States by reading the stock market reports and other radio bulletins published in Santa Marta by the United Fruit Company.

Hawkins is a mystic with common sense. He has suffered intolerable disadvantages, from the point of view of the conventional man in the United States or England or Basutoland. Half white, half black, he has chosen to live in Colombia, a land part white, more black, and mostly red. The case of Hawkins shows that when a man is born with a certain amount of inner iron, the fewer supports he has from an unhealthy background the better for his growth. Oaks do not grow on trellises.

After my return from the Goajira, Hawkins engaged a carpenter to make a couple of timbers to bolt on the stern of our thirty-three-foot dugout canoe so that we could perch the Johnson outboard motor on them. The trouble was that the outboard motor, when clamped to the gunwale of the lifting stern of such a canoe, was too high for the propeller to reach the water. After four days of experimenting we got the outboard motor fitted to the V-shaped timbers on the stern at just the right height. With an old, toothless man—whose name made no impression because everyone called him "Maestro"—as steersman, we rounded up our crew. The Maestro's son by his first wife, his son by his second wife, and two other boys who were perfect foils for his two boys, were the oarsmen. Hawkins and I were passengers and engineers. We set out from Santa Marta, a beautiful harbor crescented by gray and green mountains with purple shadows.

After pulling the starting cord several times, I got the

motor going, and we went around a point and crossed Taganga Bay. We seemed to be sitting pretty, with this little product of capitalism purring on our stern, until we shot around another great rocky head, called Punta Aguja (Needle Point), and hit a combination of tide, wind, and African swells. I lost my breakfast.

"Vegetarianism always seemed sensible to me," Hawkins remarked. "And yet I must admit I have never been able to wean myself from meat."

"I despise both civilization and savagery," I rejoined.

Of course, just here in the narrows, between a high bare island at our left and a high barren peak at our right, the tide slashing along with us and a heavy ocean roll coming in on the wind to fight it, our motor *would* go dead. You could not blame it much. It had been under water off and on for fifteen or twenty minutes. After we had passed Taganga Bay, we had met quite a noticeable swell. Each time the canoe's stern had gone down in the trough of a wave the spark plugs and the motor had got wet. Now, as we lay pitching helplessly in a maelstrom, the entire motor went under water repeatedly.

I have never liked being sluiced through these narrow places by a current, and I was a little bit worried. It seemed to me the men took forever to get out their oars, which were merely long poles with flat boards lashed to them with rawhide. The wind was dead against us, so there was no use trying the little sail. These canoes have neither keel nor centerboard and are totally unable to beat to windward. The four boys started rowing. The old man got a steering oar out on one side of the stern, and we embarked on one of the most peculiar species of marine locomotion I ever have seen. We worked over to starboard, very close to the mainland shore, which was growing higher and more pre-

cupitous all the time. It was indented every half mile or so by small bays, too shallow to afford any real protection, yet giving what you might call a twenty-five per cent lee from the full force of the wind and waves. The old Maestro at the steering oar put her head into every one of these bays.

We actually were covering about thirty per cent more distance than was necessary. The men all vowed that it made rowing easier, and that doing this extra distance would bring us to Gairaca Bay faster than if we took a straight course. By taking out the spark plugs and drying them on my handkerchief when I reached the first of these bays I managed to get the motor running. As soon as we left the bay it stopped again.

The old man held the steering oar. His older son—by the first woman he loved very much; and his younger son—by the second woman he loved very much—steered and rowed beautifully as a family unit. All three sang with gusto, understanding no word of English, a song I had taught them:

Say something, say it again,
Tell me that you love me like you told me just then.

We went up the most terrific coast I had ever seen. The high mountains with visible snow on their peaks, only thirty miles inland, march right down to the tropical coast. They are bare rock in only the last six hundred yards. The sea, which rides in there from Africa on the northeast trades, hammers their bare feet. You aren't afraid at all, because it is very big and very wonderful, and just what you have always dreamed about. You are afraid of being drowned only in eight feet of fresh water with a soft, sandy bottom.

"Yes," said Hawkins, lighting a stogie, "persons who eat

meat are simply trying to prove that they are more meatish than their own species. Persons who concentrate on vegetables and fruit are really curious about life. Hence they are commendable. But why is curiosity commendable?

"Curiosity is commendable," he went on, "only if we start with the predication that we know nothing. If we start with a Hitler, a high priest, a Mumbo Jumbo, or a Mussolini, nothing is commendable." He ducked a cloud of spray, which soaked me. That came from our port oar.

We were too close to the rocks. It looked as if we might be sucked in onto them. The old man gave a sharp order and threw the steering oar handle to starboard. We pulled away.

Hawkins squinted at the geysers of white spray leaping off those tremendous rocks.

"It is quite possible," he said, "though not exactly probable, that the Taironas will turn out to have been the most advanced of all early American peoples."

"It is not probable," I remarked, "because no evidence ever has been brought forward to indicate that they had any system of writing at all, let alone such a highly developed system as the Mayas had."

"Yet," my mulatto assistant maintained, "what has already been found of their gold and of their stone work by Nicholas, Preuss, and Alden Mason shows that they had a very high material culture. And it is still quite possible that in South America, which is the least-explored continent since Africa was overrun by big-game hunters, there will be found a number of civilizations we haven't yet heard of, and that one of them may prove to be higher than the Mayas. Which means, of course, higher than the Egyptians, or any B.C. culture except the Greeks. It is doubtful if there will ever be found in America the remains of any

culture surpassing the Greeks in that nebulous thing which you might call the essence of expanded living. Next to the Greeks, the people who have probably done most to make life beautiful and pleasant are the French."

He stopped to cup a match in his mottled hands against his spray-soaked cigar.

"I don't see how man, which is born of woman, which is made of man's rib, both thus forming a circle like everything else we know, and both of which came from the unknown and are headed back to same—I don't see how man, or woman, can condemn any fellow man, or woman, for anything.

"It is such an arrogant assumption of God-like posture to condemn. Not that God ever condemns. Personally, I doubt if He ever destroys, but I am damn sure that He never condemns."

We were in another bay now, and could hear each other more easily. Hawkins settled back against a box of canned goods. (It is not safe to count on "living off the country" on a trip like this.) His posterior was on a sack of coconuts, which raised it above the water he was languidly bailing out of the canoe with half a calabash shell.

"It always interests me to compare a primitive country like Colombia with a civilized one like the English civilization of Jamaica, where I was raised. What good things can you credit to civilization? Mechanical inventions? I wonder.

"The airplane may possibly be an exception, because it is a thing of beauty, if they ever succeed in making it silent. But there is no doubt that the telegraph, the talking machine, and the radio have definitely moved us back toward the ape. Especially the radio. It has destroyed the art of oratory.

"Here is this wonderful discovery of how a man in Ed-

mondton, Alberta, can speak to a man in New York, which has brought out our most ape-like instinct. The man in New York demands that the man in Edmondton shall talk gibberish. Here is Eddie Dooley, drooling gibberish about football, and making a far better living than I can make by telling you about the Taironas. And there is a comment on civilization! But why not? Isn't a hot present with even the fool game which we are living more important than a cold, artistic past with nothing but female anthropologists to comfort you? Which is all anthropologists have, isn't it, Mr. Mason?"

"Don't get fresh, Hawkins."

"No, sir." He scratched his nose, whether in real or mock embarrassment I could not say. "Well, one wonderful thing the radio has done. It has served to coalesce the human race in its instinct to put its back against the wall and not be afraid of solar eclipses, lunar eclipses, equinoxes, line storms, or the fact that we know practically nothing about what exists in the terrible space off this curious ball we live on. Radio is a great thing. Even if man did not come from the missing link, even if all he came from was a New York stock broker, he has come a long way when he has discovered how to talk to himself between London and New York. What he talks is usually drivel. The fact remains that he shoots his voice out far, and that is something."

We were out of that little bay and in the full ocean again. Hawkins and I fell quiet, admiring how those tireless oarsmen fought the awful elements. They were deadly silent now. I cannot describe their expression; but it was as if they were looking at their feet, something they saw every morning. But they were not looking at their feet; they were watching the flashing eyes of the old steersman.

It was the God-awfullest coast I have ever seen, with

huge rocky boulders as high as the stars, and an ocean thundering against them as high as the moon. Hawkins and I were frightened now. The waves seemed bigger. The others were alert, but not frightened. It was the only coast they had ever seen. Why should they be afraid of it?

But I had seen other coasts. Cape Fear, the Grand Banks, and Hatteras seemed tranquil now. It wasn't the sea alone; it wasn't the mountains alone. The two together made this power—power like ice under my skin. Power that made me want to run like hell; power that I knew would drag me back again. I went up and down that coast eight or nine times, and I'm not through yet, God willing. The tremendous mountains are banded like an agate. White snow at the top, then a strip of bare, glistening rock, then miles of green jungle, and finally a black granite cliff hammered by green ocean swells that break into another strip of white. The swells are pushed by a trade wind that blows steadily at a five-to-seven-point strength on the Beaufort scale on ninety-nine days out of a hundred, mid-June to November, which is when we were there. One hundred days out of a hundred, December to May, it blows seven points on the Beaufort scale. We were skirting this lee shore in a thirty-three-foot open dugout canoe, propelled only by eight brown arms. The motor's spark plugs couldn't be kept dry in those swells, and the dirty leg-o'-mutton sail could be used only when the wind was behind us. It didn't get behind us until we were coming back laden with pottery jars which contained the bones "of persons who thought they were very important long before Alice Roosevelt Longworth was born," as Hawkins put it.

"But I am an extraordinary human being, because nature has given me an uncanny ability to judge human values," Hawkins declared, as we swung into another bay. "For in-

stance I know, without ever having met them at all, that Al Jolson and Mary Pickford are swell people and they have been through hell and are still up there with the flag flying. And I know the name Rockefeller is a misnomer, for none of them have enough granite. Whereas, pretty well all the Morgan clan are swell birds, and marry into Arthur Woods. I am a specialist on human values. That is why I go about digging up high priests who lived six hundred to six thousand years ago, even maybe back to when the camel and elephant were roaming over the American scene, instead of the McAdoos and the Smedley Butlers and similar narcissistic products of that great economic fallacy we call advertising."

Off Gairaca Bay are two big rocks. We were turning into a little channel between them and the huge crag which guards the western entrance to the bay. Tall columns of spume and foam shot upward out of the hollow rocks, hissing like jets of steam.

As we passed these geysers, we turned our bow southeast, south and southwest, and got up the sail. The bay is large enough to hold the United States Navy. We shot along under the sail. Tarpon began leaping and tuna began leaping. The two sons of the Maestro found their hands stretching toward the sticks of dynamite they had brought along for the purpose of killing fish.

We ran in toward a lovely beach, except that all the northern end of it was made of rocks instead of sand. It was completely graduated, with larger rocks fading into smaller rocks, and smaller rocks fading into pebbles, and pebbles fading into sand. All the sand was at the southern end of it, where a fresh-water stream—now dried up—once came in. It reminded me a little of "Treasure Island." It reminded me a little of every beach which every white man who has

had to wear a vest, stiff collar, and worship girls on the cover of American magazines, has dreamed about. It also reminded me of something I had never seen before. I had read about it in Robert Louis Stevenson, in Freud, in Babe Ruth. It reminded me of a kind of fear which I cannot describe. It is like the fear of being on first base when somebody hits a home run, and you cannot score.

Just back of the beach were some little sloughs and two or three actual pools of stagnant rain water, a sign of mosquito life. Skirting two of them, I picked up the *quebrada* (stream bed). There was no surface water in it now. This region has two dry seasons and two wet seasons every year. The *quebrada* bed made a perfect road, although now and then I had to step under branches of the great trees which lined its sides. I had not gone more than a hundred yards from the beach, but was already out of sight from the men, when an animal crossed the *quebrada* within easy gunshot. I did not shoot. It looked something like a domesticated dog to me at first, and its whole manner was so leisurely that I took it for a dog until too late. Then, I realized there was something feline about it. It seemed to be something halfway between a dog and a cat. It was dark gray in color and about the size of a large bull terrier, but a little slenderer. Later, Hawkins told me it was a *zorro bravo*, or kind of wild dog (*speothos*). He said that, in packs, they sometimes attack men.

Another hundred yards up the *quebrada*, I turned off to the right and had not gone more than fifty or sixty feet before I saw a ring of flat stones, set upright in the ground. It marked the house site of a Tairona Indian who had lived here before the Spanish Conquest.

The flat plain, enclosed by a horseshoe of hills which runs back from the north and south sides of Gairaca Bay, is

packed close with these stone rings. Some of the rings are only four yards in diameter. Others are as much as fourteen yards across. The stones themselves average about a foot in length, half a foot in width, and only two or three inches in height. In some sites the greater part of the stone projects above ground; but in the majority most of the stone is underground, with only two or three inches showing. Frequently, the stones over a considerable portion of the circumference of a house will be covered with earth, or will have been washed away entirely, so that it is not always easy to trace the outline of the ancient dwelling. I was interested, because it was within such rings that I proposed to do my digging. The ancients buried their dead in large jars under the floors of their houses and churches. My attention was diverted now by a flock of plump wild doves, which flitted through the shade of the dark bush and made it resound with their mournful cries. After shooting half a dozen, I went back to the beach.

The men had unloaded all our stuff from the canoe, and Hawkins and another man were putting up my mosquitero. The contraption is wide enough so that four men can get into it with a folding table and have a good game of bridge in perfect comfort, despite the ferocious mosquito and the vicious little *jejen* (pronounced *hayhane*). The *jejen* is a kind of gnat that so infests the coast of Colombia that it is called *plaga*, or plague. They have almost every known form of tropical insect pest on this coast, as we were soon to find out.

Compared to some of our civilized beaches at home, these wild beaches are strangely lacking in driftwood. That is because very few steamers ever pass this coast. But a big dead tree a few yards inland promised a good supply of firewood. Hawkins had already cautioned me about the poison

trees here. In British Honduras I had had the painful experience of having most of the skin removed from my right forearm, after carelessly leaning against a poisonwood tree. The few poisonous trees at Gairaca were of another species. Not only was their bark dangerous to touch, but if you merely lingered under their shade—the one Hawkins pointed out was an enormous specimen—in a few minutes you would begin to feel very ill. This sounded like a fairy story to me, but I never cared to test it.

The water supply was a more difficult problem than the food supply. We had the canoe's twenty-gallon keg and a ten-gallon jug with us for immediate necessities. Although there had been rain recently in Santa Marta, we found not a drop of water in the stream bed for us to count on for the future.

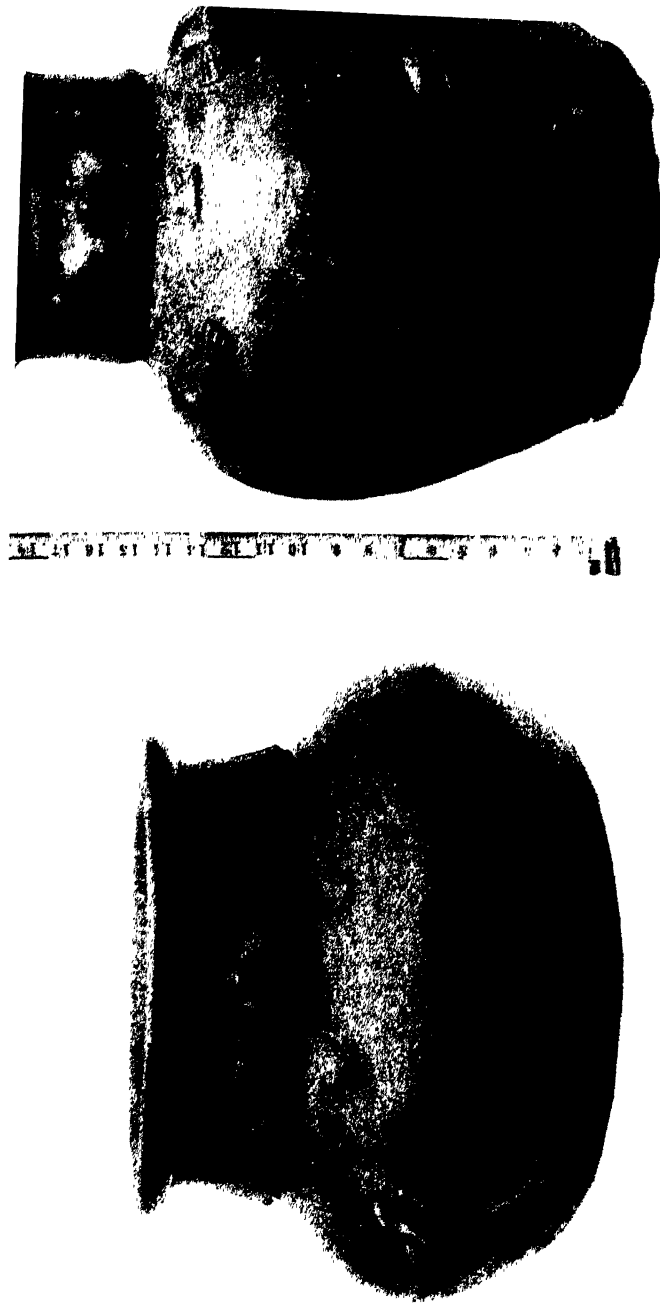
After lunch the men went up the quebrada a hundred yards and dug a well. When they had gone down about three feet they struck water. It was muddy, but after you had let it settle you could scoop off top layers of the fluid, which were not much thicker than pea soup.

Our lunch consisted of broiled doves and beans and rice. Beans and rice are the stock foods of all the lands from the Rio Grande, in northern Mexico, to those further south in South America than I have wandered. The natives of Colombia do not use the tortilla, the thin, flat cake of corn flour which is a chief article of diet in Honduras, Guatemala, and Mexico. A tortilla, to them, is a much larger cake, also round, but about ten inches instead of four in diameter and about an inch thick. It is made of wheat flour instead of corn. Ysidro had just tried his hand at turning out some of them. They were badly scorched, but even if they had not been, I should not have relished them. Hawkins broached a big tin of crackers, which I had brought for just

such an emergency, and a bottle of pickles. It is surprising how one or two little extras, such as pickles, jam, crackers, or a tin of tomato juice or grapefruit juice will help a white man accustomed to a far richer and more varied diet endure the monotony of beans and rice and occasional fresh game. The average archaeological expedition cannot afford to provide such tidbits for its laborers, but they are not accustomed to them anyway.

There was immediate competition now, however, for a globe of red tin, about two-thirds as big as a basketball, which contained Dutch cheese. Our men did not expect any of the cheese, but they asked if they might have the tin when it was empty. I promised it to the Maestro, partly because he was the leader of the group and the oldest, and partly because he had asked for it first. A month later, when his work for me was finished, the tin was not yet empty. Eventually, I promised it again—to a handsome and engaging bushwhacker of about sixty, who had committed three murders and who became my cook when Hawkins and I went into the high mountains to trade with the Kagaba branch of the Arhuaco Indians. But there was some bad luck about that tin globe; it never reached those to whom I promised it. It was lost or stolen just before we came out of the high mountains. It is pathetic how such people as these Colombians treasure the slightest trifle. One of our own people would throw away an empty bottle or one of the little tin cylinders in which my still film was packed.

It is hard to tell just how much Gairaca served the ancient Indians as a residential town, and how much it was regarded primarily as a cemetery. Undoubtedly, a good-sized population lived here at times, although there is much plausibility in the suggestion of Alden Mason that the occupation of Gairaca by living Indians was largely seasonal.



(*Museum of the American Indian, Heye Foundation, N. Y. C.*)
Tairona burial jars, showing grotesque face and hands in relief. Note (*left*) tear being



A type B burial jar being unearthed from Tairona cemetery at Gairaca Bay. The little dish at left had been filled with food for the soul of the departed.

They lived here, perhaps, when the fishing was good, retiring into the hills at other times. I am inclined to think, however, that many of them lived at Gairaca permanently.

Visualize that life if you can. No snow to feel; only snow to look at, up there to southward, on the big mountains, while down on the coast you swim in the clean green water and drink the melted snow!

But the brooks of ice water are mainly east of Gairaca and served other villages. The presence of two stone water reservoirs shows how the Gairacans met the problem which had forced us to dig a well in the quebrada bed. It is doubtful if they had to worry very poignantly about a shortage of water. Certainly, they did not have to worry about a shortage of food. They had sunlight, song, and what Witter Bynner calls "the liquor of her laughter, and the lacquer of her limbs." These things, and not the gold which made the white men call it the coast of El Dorado, made the red men call it the coast of Paradise.

Gairaca has not so many remains of stone roads, bridges, and other engineering efforts as mark the sites further northeast, or "up" the coast. The outstanding feature of Gairaca is the part it played as a cemetery. Some persons were buried in the free soil. A far larger number were buried in jars of varying types and sizes. In addition to the three types already established for Gairaca by Dr. J. Alden Mason, I found a new straight-sided type. (See Chapter Seventeen.)

In most cases the evidence indicated that these burials in jars were what archaeologists call "reburials." The bodies had been placed in the ground first, then had been exhumed, and a few bones, usually the long bones and sometimes the skull, had been given a ceremonial burial in a jar. The human remains now to be found in the free soil, however, are original burials, stretched out in articulated posi-

tions. So, I believe, were a few of those in the jars. In two cases at Gairaca there were found in the jar all the skeletal remains except two or three finger and toe bones which may have rotted since they were interred. The evidence here pointed to original urn burial.

Many of the jars contained trinkets, but I did not find any gold here as I did at sites further up the coast. One burial jar yielded two nice circular discs of shell, which had been hung in the ears. The commonest objects were axheads of a nicely cut and shaped gray or black stone, and stone beads. It is quite possible that these axheads were a sort of currency. There is little doubt that they were recognized as a form of wealth. Some of the beads were jadeite. Most of them were of agate or carnelian (rose quartz). Usually, they were cylindrical, but a few were round. Some seemed unfinished. They were little cylinders, carefully polished, but not pierced. These unfinished stone beads were found so frequently that they puzzled us. The mystery was not solved until we showed some of them to the chiefs and medicine men of the Kagaba Indians in the mountains, at the end of our trip.

What about the persons who were buried in these jars? Did they represent different strata in society—princesses, fullbacks, insurance men's sisters? Or was it just a matter of personal taste as, among us, whether you have a wreath carved on your tomb or an angel? Or was it a question of money—stone axheads available to pay the potter?

Many of the Gairaca Bay sites had been looted by Colombians, hoping to find here the same gold which had led the Spaniards on their will-o'-the-wisp quest of America. Rumors of gold are always exaggerated by the imaginations of greedy men. No doubt one small ornament was enough to keep alive the legend of El Dorado.

The human side of the place was ever uppermost in my mind. The faces in relief sculpture, adorning the upper edges of some of the big jars, probably were conventional sculpture such as you see on some of the tombs in our own cemeteries, rather than likenesses of real people. I kept trying to reconstruct a picture of what the men and women and children whose bones we were disinterring had looked like in the flesh. I confess that the work was depressing as well as fascinating. The plain of Gairaca is covered with thick bush, filled with the sound of lizards slithering through dead leaves and over dry sand, and the low booming note of the mourning doves. There are always some crackly leaves on the ground, because the trees take turns here and shed their leaves at different seasons. Complete silence would have been less depressing to me, but Hawkins disagreed with this view.

"Even a lizard can be company," he said.

A lot of care was needed to get the burial jars out intact, and many more were broken than were removed whole. Even the pieces were saved and carefully labeled, because they can be stuck together again by wizards in the museums at home. Hawkins and the Maestro had worked with Alden Mason and they knew this. It was hard to persuade the others until, over a double shot of rum one evening as a reward for an unusually hard day's work, I tried to give them a picture of Old Man Orchard in his smock on the top floor of the Museum of the American Indian, fixing up jig-saw puzzles of ancient pottery.

Our method was to dig carefully around a jar and then let it stand where it was for a couple of days until it had dried, because damp pottery breaks much more easily than dry pottery. Then we would go at the ticklish job of taking the earth out of it. Although many of the jars had been

covered once by inverted bowls, most of the bowls had broken. Where they had not broken, rain water had carried silt in until each jar was filled with earth. To move one of these would have been heavy labor, and it would have resulted in the breaking of the jar. They had to be emptied out on the spot. We had many anxious moments. The men sat around watching Hawkins and me empty a particularly well-preserved jar. We never knew whether, at the last minute, it would split down the side and crumble into a dozen pieces or hold its original form until the last ounce of earth and bones and carnelian beads was out of it.

The process of emptying a jar was delicate for another reason. We wanted to get as much data as possible about the way in which the bones had been placed in the vessel and their relation to the position of the ornaments. One thing which puzzled us was that many of the whole jars contained far more sherds than could be accounted for by the breaking of the cover each once had. We learned the explanation of this when we reached the Kagabas.

The woods were thick, by day, with jejenes, the little gnats which I have described. We all smoked *calillas*, powerful black stogies of native tobacco which I had bought in Santa Marta at a penny apiece. The smoke of these helped to drive back the gnats. We averaged twenty or thirty *calillas* a day apiece, and learned how to make one *calilla* last for twenty-one minutes while emitting a satisfactorily viscous and vicious fume. Nevertheless our faces, hands, and wrists, and any other part of us which was uncovered, became thickly speckled with the little black dots which the jejen leaves on you for several days after the original bright red swelling resulting from its bite disappears. We found that, at night, when the jejenes stopped working—unless there was a full moon—a large and agile type of mosquito

was very numerous. They did not bother me, snug inside my mosquitero, but the men suffered so much from loss of sleep that the efficiency of their work soon became seriously impaired.

Before leaving Santa Marta I had offered to provide my men with a tent with netting, from the expedition's exchequer, but they had declined my offer. Now they agreed eagerly that we had better go back to Santa Marta and get a screened tent for them.

I had special reasons of my own for wanting to return to Santa Marta. When I sat in my hammock the first afternoon, its rope of native agave fiber, which gave rope, dental floss, and carpets to the ancient Americans from Peru to Mexico, had broken. We had doubled it, and that night about 3 P.M. the doubled rope had broken again. It was the worst moment I have ever had. I have nearly died of typhoid fever, scarlet fever, kidney trouble, pneumonia, malaria, and falling trees; but that moment in my sleep when I felt myself falling and knew—even in my sleep—that it was NOT the usual dream, was the worst moment in my life.

As it was, with my hammock swung right over the rocky beach at Gairaca, I got two broken ribs on the right side. I never even knew they had been broken until a year later when I got a broken rib on the left side.

The Maestro thought he was gaining my favor at the expense of Hawkins. He was more and more inclined to ignore Hawkins' instructions as to where to dig, although he brought in fewer bits of archaeology than any other man in the crew. He would excavate a whole tremendous wall of stone and earth one afternoon when he was not closely watched and get absolutely nothing, except perhaps two or three sherds of the common type. Meanwhile, his two sons,

Ysidro and Coronado, were gaining quite an uncanny sense of archaeology and bringing in all sorts of finds. So was Hawkins, who always has been an expert at every occupation he has taken up, and who never will be rich simply and solely because he has less interest in money than any man I have met. Hawkins would like a little money, though, to send his oldest son, the apple of his eye, to school in Jamaica.

I have a strange feeling about Hawkins. I don't think future ups and downs will matter much to him for two reasons: first, because he has had so many ups and downs already; second, because he is, I think, more than any other entity I have met, a supreme being. He often has a look on his face of a man who has seen both heaven and hell and found them much alike. Hawkins has taken a lot. And he can take a lot more.

He has been botanist, doorman in a house of ill fame, farmer, chauffeur, croupier, snake doctor, mechanic, steerer on a stock farm, ethnologist, judge, bank manager, bartender, big-game hunter, smuggler, murder-adjustor (a profession peculiar to Colombia and perhaps one or two other South American countries), and archaeologist. He knows more about the archaeology of the Tairona region than any other man, not excluding K. T. Preuss, Alden Mason, and myself. But he doesn't know how to capitalize any of his knowledge. He doesn't want to capitalize it. He wants to use knowledge not to get money but to get more knowledge. That is why he is more like a new Messiah than any man I have met. He never tried to put over any message on anyone, but a sense of the indestructibility of energy and truth just ooze out of him.

Hawkins and I always talked in English, although he had been in Colombia so long that he was more fluent in Span-

ish. His use of English to me made the Maestro jealous. The other men did not care because they were young and were thinking about women in Santa Marta.

"At moments like these I think that archaeology is very unimportant," I said to Hawkins, fishing a rotted fibula out of a burial jar.

"At least you want to think it," he replied. "I don't blame you for not liking to feel around in that mud, but you'd better do it. You never can tell when one of these fellows might locate a gold earplug and slip it into his pocket while your back was turned. Anyway," he continued, as a judicial look spread over his always rather serious face above the gold teeth, "it's good for the morale of the men to have you empty out all the jars. Then nobody is suspicious of anyone else—except that none of them can believe that you actually were sent here by a museum."

"Of course they think I am looking for gold."

"Of course. Except Coronado. He is more original."

"What does he think?"

Coronado was looking up at us, but he had understood nothing except his own name.

"He thinks you are a German spy who has been sent here by the Venezuelan Government to find good harbors for landing Venezuelan troops, in case of a war with Colombia."

"Si, si," Coronado grinned, understanding the national names and getting the drift of Hawkins' remark.

"None of these people are sufficiently advanced to understand that man's curiosity about his own past might lead him to spend gold," Hawkins muttered.

In the middle of that afternoon it began to rain, and I could see that soon it would rain harder. And I thought that today we had already done our duty by the museums

in Philadelphia and New York, because we had found three of the best gray stone axheads I had yet seen. Those ancient Taironas were just as crazy about axheads as the ancient inhabitants of Honduras had been about whistles. Walter Pater or Robert Louis Stevenson could write a beautiful paper about one gray stone axhead which is in my hands as I write this. It is narrower at the top than at the bottom, lovingly cut and beveled.

"Pues, ya tenemos basta cosas. Vamonos a la casa!"

A man in my position gets a kick, now and then, out of telling older men to quit working at 3:30 P.M. He knows full well, if he has any imagination, that there are days when museum directors like George G. Heye and Horace H. F. Jayne quit work at 3:30 P.M. to see if their wives have been suffering from toothache, or something. The great capitalists of the world, who put up the funds for the museums, are also stopping work at 3:30 P.M. to find out if their mistresses are unfaithful or if their daughters are careful. Even God takes a day off now and then. How else can you account for hurricanes, earthquakes, and wars?

Anyhow, some of the best artifacts which I got at Gairaca were found by calling off formal work at 3:30 P.M. and letting the men range up and down the beach. The shore was plentifully sprinkled with old axheads. If anything better than their stone axheads was produced by the Taironas, I have yet to see it. Not even their clever goldwork surpasses them; not even their massive stone blocks used in roads and bridges.

From my hammock that evening I listened to a lecture Hawkins seemed to be giving the other men. My Spanish is very spotty, but it seemed that he was describing some sort of mythical monsters.

About nine-thirty, the men began to get sleepy. Hawkins

crawled over along the pebbly beach, lifted the edge of my mosquito net, and came in. There is barely a foot of tide on this beach; but it was now high, almost reaching his feet as he stretched out below me.

"What were you telling the men just now?"

"Fairy stories my mother told me when I was a boy. I want to keep them from getting too blue and homesick," explained my extraordinary foreman. There was a long silence, although I felt that my admiration for him must be penetrating the darkness.

Then this incredible man began talking about the joys offered explorers in the possibilities of Goajira ladies. I had not told him my adventure at Rio Hacha.

"How many times have you been married?" I asked.

"Only once, the way you mean." His calilla end blazed up. "I guess, when all's said and done, she was the best woman I ever knew. Those two little boys you've heard me talk about are not my legal sons. They are my children by this woman I started to live with to spite her sister, whom I was in love with."

"What became of the sister?"

"She died of tuberculosis." There was another long silence. "I guess she wanted me as much as I wanted her, only we were sort of foolish. Just before she died she told me I was the only man she had ever cared about."

"You are a damn egotist!"

Hawkins' gold teeth gleamed through the dark behind his glowing cheroot. "We are all like that, aren't we, Mr. Mason?"

What could any leader of an anthropological expedition do with a foreman like this? He was giving me a lot of information for which I had not paid.

"We go days and days without speaking to each other—

sometimes months and months—silent in the same house.”

“What’s the matter with her? Don’t you like her at all?”

“She’s a wonderful woman. She keeps house perfectly. She’s a devoted mother. But I don’t like her at all. And I just took up with her to spite her sister.”

“But you like the two sons she’s given you.”

“Yes. I have a lot of fun playing with them when I’m home.”

“What more do you want?”

“I guess you know. There isn’t much more. But I still think I was a fool to walk out on her sister, just because she said some silly little thing to me one evening which hurt my pride. Pride is the cause of most human misery.”

The next morning I got up earlier than usual. As I looked about, I was rather proud of myself. The beach, to the north of our camp, was piled for fifty or sixty feet with the ancient pottery we had dug out of the ground. The smallest pieces were little shallow plates, about the size of a large tea saucer but with higher, flaring sides. They had held the bones of the small birds or animals placed in the ground to feed the soul of the departed in the next world. The largest pieces were the great burial jars, some four feet high, which had held the bones of the departed. They, with piles of in-between pieces, were massed there on the beach for us to take back to Santa Marta. But we could not take them all in one trip. We had to leave some and send Hawkins back for them from Santa Marta.

Hawkins and I were both glad we would soon leave Gairaca. During the night a *burro* strolled out of the bush and ate his straw hat. It gave us all a scare. This coast is infested with smugglers who resent the presence of strangers and would not be above robbing them if they found them off guard. All these hills, for miles back of the coast, serve as

grazing ground for the half-wild cattle and mules and burros of a wealthy man in Santa Marta. Further up the coast the land is communistically owned by fishermen of Taganga, including those working for me, just as all this region was communistically owned in the days of the Taironas. The private ownership of land is one of the many vices the red man has had to learn from the white.

I kept thinking that this coast would take care of some Americans who are troubled by our own economic system. The Government will give you, under regulations similar to our homestead laws, the equivalent of four hundred acres, in return for a minimum amount of cultivation and the Government tax of about four dollars per annum. There are two or three crops a year and no droughts.

Today, deserted, Gairaca Bay is dismal. I was glad to leave its stifling hot bush, which never was silent. The place always frightened me, although I cannot explain why. Perhaps it was the mourning doves, the lizards scuttling through leaves, a feeling of great age or of being disconnected from everything outside. Unarchaeological though it is, I must confess that I don't like groping around up to my elbows in cream-like mud to get the remains of high priests out of burial jars. I savor the job even less when the slimy, crumbly bits which come up in my hands prove to be the bones of children.

"God damn the God that kills children!" I growled at Hawkins.

"Amen," said he. "But you wouldn't be quite so bitter about child death if you had more than one."

God is a fog. I like children. I like my own child. Here, in order that eventually he might not be entirely ashamed of me, what was I doing? I was fishing up the bones of children out of burial jars.

Chapter Thirteen

ROADS THAT WERE NOT CAESAR'S

WE FOUND NO INTERESTING archaeology at Nahuange except a small clay figurine showing a warrior in cotton armor and a lot of little square clay chips used in a game which was the prototype of poker. There were architectonic features of some interest at a site a mile inland from Nahuange, which I named Nahuange Arriba. Six or seven rectangular enclosures averaging sixty-five feet in width and one hundred and thirty feet in length had surrounding walls in the shape of sloping mounds from one to three yards high and from one to two yards broad at the top. Considerable excavation in the mounds threw little light on them except the negative conclusion that they were not burial mounds. They yielded only a scanty near-surface sprinkling of red and black sherds. The tops of the mounds were hardly broad enough to have supported buildings. The central enclosures had ground that was too porous to have held water, so they probably were not reservoirs. It is possible that they were courts of some ceremonial significance.

After five days and nights of torture from insects we paddled our canoe to Cinto, the next bay east of Nahuange.

There were stone roads at Cinto, and other signs of a large population. Cinto gave us our first Tairona gold: an earplug—or possibly it was a nose plug—trumpet-shaped.

The country back of both Nahuange and Cinto is gorgeous and rich with black earth, tall trees, and little rivers which come tumbling down out of the snow mountains. Once you go back of the swamps on the coast the insects are not bad.

From Cinto we paddled around stormy Cabo San Juan de Guia. With our oarsmen pulling until their eyes stood out of their sockets and our canoe lurching ahead of great following combers, we raced through a narrow hole in the reef half a mile east of the Cabo. We hauled the boat up on a white beach and made supper. The moon was rising through a cloud of spray which fell constantly on our tents from the reef off the beach. Our camp was three miles steeply downhill from the ruined city of Pueblito. The stone road there, the stone platforms overhanging river banks, and the extensive stone house and temple foundations, suggested an even larger Tairona population than that of Cinto, Nahuange, or Gairaca. There was even a large theater, with stone seats. We endured the constant wetting for two days and the arduous climb up to Pueblito and the equally arduous and more dangerous slide back. Then we moved to Pueblito for two weeks, sleeping on the hardest beds I have encountered. They were great stone blocks, ten feet by six feet by ten inches, laid at the side of the ford by the ancient Taironas.

Eastward of Pueblito we did no more digging until we reached Dibulla. This is the first settlement of more than a handful of fishermen east of Santa Marta, which is about forty-five miles away. There are no Spanish ruins in that strip because the Spaniards never conquered it.

We waited around Dibulla for several days while Ernesto, the old, lean, iron gray Dibullan we had engaged as cook, went up to Pueblo Viejo in the mountains to bring down baggage bulls for us. Meanwhile, we used the time to dig at two or three sites in the foothills. At a place called La Cueva we got two little gold frogs, one just over and the other just under an inch in length. We did not know how important they were until later, when we showed them to the medicine men of the Kagaba Indians.

The Dibullans live by smuggling and by "trade" with the Indians, which means sharp dealing. The nude, bold, muscular Goajiros bring one or two of their canoes through the surf on Dibulla's beach every day to sell their fish or charcoal to housewives. Now and then a few of the timid little Kagabas, with dirty cotton tunics hanging from their slight shoulders to below their tick-bitten knees, drive bulls laden with sugar cane to this coastal village of reckless, drunken, hilarious, Spanish-speaking mulattoes. They have as much fear of Goajiro poisoned arrows as Goajiros have of Kagaba poison and black magic.

Hawkins told me that a few years before this the Kagabas had burned Dibulla, secretly and piecemeal.

"One house would burst into flames and then, a week later, another one. Of course the dobe walls didn't burn, but in six months' time the thatched roofs were burned off of all of Dibulla's two hundred houses."

"Couldn't they protect themselves? Didn't they shoot any of the Indians?"

"They never could catch them at it. But everyone is convinced the fires were caused by Kagaba magic."

"Oh, rats, Hawkins! You certainly don't believe that?"

"Yes, sir, I do believe it. I believe this Kagaba magic is a very real and powerful thing. These fires would start in the

most curious ways. One man I knew—he used to live in that house over there by the twisted coco tree—went to get something out of a trunk he kept in a back room, and as he opened the trunk it burst into flames.”

“What motive would the Indians have had?”

“The motive is supposed to have been resentment because a black fellow from Dibulla had stolen the gold crown and other holy objects of gold belonging to the high priest of the Kagaba village of Palomino.”

There is lots of fighting and dueling among the Spanish, Indian, and Negro population of Dibulla, but astonishingly little of it is *au cause des femmes*. “Most of these fights,” Hawkins explained, “originate from boasting contests between two men, which end in one calling the other a liar, whereupon the other says: ‘Get your gun and meet me down at the river bank and we’ll see which is the better man.’”

“But they don’t boast about their prowess with women. Everybody knows about that, because practically every man in Dibulla has lived with practically every woman at some time or another. And if they didn’t have prowess it would be known. But, believe it or not, they all seem to have prowess. I believe that women often leave their mates for other reasons than that so commonly given by civilized wives since frank sex talk became fashionable.”

Hawkins held the blazing end of his calilla near a tick on his forearm, until the tick dropped off. There are other ways of getting rid of ticks. (I prefer the method of chewing a bit of tobacco and smearing the juice over the insect, for Hawkins’ mode burns you as well as the insect.) My assistant wrinkled his brow, and I settled myself in my hammock to hear more wisdom.

“You see a woman sewing buttons on a man’s pants,” he

continued, "and you know she is not insane. You see a woman sitting around, chewing her fingernails and hoping she will find a man to put buttons on for, and you know she may go insane. You hear an American woman protesting that American men are poor lovers. You hear a French woman protesting that Frenchmen are poor providers. You hear a German woman protesting that German men are poor fighters. You hear a Russian woman protesting that Russian men are poor drinkers. And you know you have an insane woman. I suspect that women often leave their mates because they are bored. They are more easily bored than men because it is harder for a woman to get an audience for her boasting."

"Maybe you are right," I said. "Anyway, I judge that Dibulla comes as close to promiscuity as any village where I ever hung my hammock."

"Only it is what you might call 'successive promiscuity'—strictly one mate at a time, which isn't promiscuity at all. When a person is tired of his or her mate, he or she simply takes on another, and often lives next door from the first, with no hard feelings."

"What becomes of the children?" I asked.

"It is assumed that children under the age to bear children or kill men will go with the mother. But this is no hardship on the father because his ex-mate never would think of striking at him through the children, as so many so-called 'civilized women' do. And male parents are much fonder of their children here than in the United States or in the British Empire. It is understood that, whether a man has left his woman or she has left him, he may see the children any time he cares to go to her house. Everything is pretty well understood, and there is no need for lawyers or long-winded bickering, once a couple decides to break up."



A Kagaba stone road.



A Kagaba bridge, held together without nails,



(top) Circular house site, Pueblito, Cabo de San Juan de Guia,
Colombia.

The old cook and bullwhacker, Ernesto, finally got the baggage bulls we wanted and saddle mules for Hawkins and me. Ernesto walked.

We went down the beach, and sometimes the bulls were ahead, and sometimes the mules were ahead. We dodged lagoons by going inland, or swam them. We swam rivers or avoided their depths by following the crescentic sandbar at the mouth out through the ocean, not getting wet above our knees. Finally, we left the beach and got into some treacherous low country which had been swamp, but now was dried up and which was to be swampy again and nearly drown us.

We came to a place called Volador, which was just a bloody cow corral with a lot of flies, mosquitoes, and ticks. We left it very quickly and determinedly, went over a few small hills, crossed a couple of rolling rivers, and then went uphill all the rest of the day. It started to rain. Soon we were very wet because nobody had a poncho but me, and I had mine so tied with hemp on my saddle that I couldn't get it without a lot of trouble. I kept thinking the rain would stop, but it didn't.

Here and there our trail followed a fine old stone road of the Taironas. About 4 P.M., we reached a place called El Cuchillo (The Ridge). The shelter here consists of a big thatched roof on thick log uprights and no walls at all. But the roof is large enough to keep the rain off fifty sleeping men.

We had finished supper by a quarter to six. It was still daylight, if you could call the dull illumination under the thatched roof in this dark crevice in the mountains light at all. Hawkins and the old man were still steaming, but they were pretty comfortable. I felt like a million dollars. We

flopped into our hammocks right after supper, as men do in the bush.

"There are more snakes around here in this hundred meters or so than anywhere in Colombia. A friend of mine died right over there. He went to get water from the brook and in the early morning light put his foot right on a *boca dorada*."

Ernesto, the cook, spoke of the incident rather proudly. The Colombians call the fer-de-lance a *boca dorada* (golden mouth) instead of *barba amarilla* (yellow beard) in the Honduranian mode.

We lay in our hammocks watching a spark at the end of each calilla, and talking aimlessly, cosily. We were three men brought together by chance: an American, a Jamaican, and a Colombian, sharing the common cosiness of a bush camp, unthawing our tongues with tea and warm fire. I have never found a better life. Those casual camps I have known, especially the ones I have come upon on rainy afternoons, with a dry roof and a snug fire! Those men—haphazard, reckless, boastful, drunken, generous, pockmarked, scrofulous, poetic! Those bush rangers of Oregon, Quintana Roo, Honduras, Colombia, Mexico, British West Africa! Men who carry their lives balanced in the flat of their hands like a well-hefted knife, ready to stab with or to throw.

And the mornings! When the rain has cleared and the sun begins to climb the tall trees, and the steam rises from the grateful ground! If it hasn't cleared, if it's still raining, you can have an extra piece of bacon as a compensation. You can stay in camp all day if you want to. Better still, you cannot stay in camp and you know you don't mind the rain. You know you don't mind anything. You like to travel on a mule in the mountains far away from everybody. In the faraway, wet, misty mountains of otherwhere. "The

white man by the Indians most beloved from the far other-where." That's you, according to General Rafael de Nogales, in the deep, deep bush, which frightens those who think that man makes the best stink in the world. It gives its peace to those who show that they love it enough to come back.

The shadows grew fainter on the thatched roof. Hawkins began to snore.

"Do you really think the Indians burned Dibulla, Ernesto?" I asked.

"*Ciertamente.*"

"But why did they do it?"

"That black fellow from Dibulla who's up in Pueblo Viejo now, that black fellow who was cook for that American archaeologist who came here before you, he stole the gold crown of the mama of Palomino. He stole the gold crown and a lot of other rich things. It nearly broke the mama's heart."

"What became of the man? Did they do anything to him?"

"Nobody knows. He disappeared. He's not been seen since. Maybe the Indians killed him. Maybe he skipped out. His brother's up there in Pueblo Viejo now."

Hawkins had not told me that the man who had robbed the Indians had been associated with him in Alden Mason's expedition of a few years ago. I was planning to visit Palomino. Hawkins had been holding back important facts which might alarm me.

About ten o'clock the next morning the bulls got stuck on a very steep grade. One of them lay down and would not move. We had to lighten his load and converted my saddle mule into a baggage carrier, which meant that I would walk. Hawkins' mule was too weak to carry baggage, or me.

In fact, Hawkins, who weighed a hundred and forty pounds, had to walk up most of the hills.

"Why didn't you tell me that you were in Palomino when the gold crown was stolen?" I asked Hawkins as we watched the men unloading the animals.

He looked uncomfortable.

"Doesn't that mean that the Indians would be down on you?" I continued.

"No, not at all. That man who stole the crown is still in Santa Marta. He worked for Dr. Mason and he sold the crown to someone in Santa Marta. But he did not steal the crown while he was working for Dr. Mason, nor while I was with him. The Indians do not blame Dr. Mason or me for that at all."

I wanted to hear more about this business. Going into an Indian country with a man known to have been associated with the man who stole the crown which caused the burning of Dibulla might be risky. But Alden Mason had told me I could trust Hawkins.

We came to the top of a hill and then ran along a low ridge. Just before we went into this stretch we caught a glimpse of the dark-blue ocean far below and behind us and, way up ahead of us, a snowy peak. The air was noticeably cooler. We were about three thousand feet up now.

It was three o'clock when we reached Pueblo Viejo. The man who owned the bulls lived here and was one of the town's chief citizens. He gave us his one-room house, all to ourselves. Ernesto unpacked the things and went around buying eggs for our supper, one here, two there, one there. He had a rare, rasping, hungry vitality, like a rat gnawing at a barrel of crackers. Hawkins pointed out all the pretty girls to me at once. His manner toward them and toward all the citizens of Pueblo Viejo was reserved—cordial but reserved.

He has a tremendous, deep blue dignity, like the sea way off from a mountain.

We had to stay in Pueblo Viejo several days. You can't hurry anything in these countries. All we wanted was a few more bulls to go to San Miguel, but you cannot get things in a hurry. Each evening Kagaba-Arhuaco Indians would crowd into our hut and beg for rum. Generally they had had some before they arrived, at one or two of the rum shops down by the corner. The Pueblo Viejo populace lives off the Indians, and the thing the Kagaba Indian likes better than anything else is rum. He assumes that all white men have it. The rum here is like clear water; it is made from sugar cane, of course, and is very potent. The Indians and Colombians drink it like water. They pitch a tumblerful at a time into themselves.

Pueblo Viejo has a floating population of Indians who come in to trade. It may seem too bad to give the Indians rum, but you can't get anything out of them any other way, and they're going to drink anyhow. When they can't find rum, they drink *guarapo*, a villainous mixture which is left over when they make the *panela*, or block sugar, from their cane. It tastes a great deal like mild vinegar, is almost the color of oatmeal water, and contains about as much alcohol as beer.

The very first evening I started my ethnological collection with a good deal of success. I got several *mochilas*, or bags, several *poporos*, and two flutes, a male flute and a female flute. The male flute has one hole and one note; the female flute has several holes and several notes. "Just like a woman," said Hawkins.

Poporo is the Colombian name, *sugi* the Kagaba name, for the small, long-necked gourds in which the Indians carry powdered lime to eat with coca leaves. The latter are carried

in a small cotton pouch which each Kagaba wears at his side.

A round stick, six to twelve inches long and about as thick as a big pencil, is passed into the opening in the neck of the gourd. When it is drawn out again, some of the powdered lime is adhering to the end of the stick. A man crams a handful of the dried coca leaves into his mouth, then licks the lime powder off the stick, chewing the mixture for several seconds, or minutes, before swallowing it. Meanwhile, he rubs the wet end of the stick around the neck of the gourd. This rubbing, which is just a habit or ritual, makes a rattling sound. It gradually leaves an accretion of lime, called a "collar," on the gourd.

Coca, not to be confused with cocoa, is, of course, the plant from which we get cocaine. It seems probable that the first use of anaesthetics in operations was the use of coca by Peruvian surgeons, long before the "discovery" of America. (European surgeons did not use anaesthetics until the middle of the nineteenth century.) Moreover, the Peruvians trepanned skulls centuries before the white men came.

The Indians say that the chewing of coca with lime, especially on an empty stomach, gives them renewed energy. It also drives away the pangs of hunger. Hence it is particularly useful on a long march. Experiments by the English physician and ethnologist, W. H. R. Rivers, with coca and a number of other stimulants, including alcohol, coffee, and strychnine, tended to confirm what the Indians claim for coca. Rivers found, moreover, that coca was the only one of the drugs he studied in which the preliminary exaltation or increase of energy was not followed by an equal, or even greater, let-down. Only recently, New York physicians found that lime increases the effects of coca. They were

much surprised when they were told that Indians in South America have known this for countless centuries.

Coca leaf is not in any sense an intoxicant; it is merely a stimulant. The Indians do not "get drunk" on it, nor does it produce in them the "dreams" of the opium smoker, or the visions of the peyote user. The Indians also eat the berries of the coca, which look much like barberries.

Kagaba farms are scattered far and wide from the homes of their owners. But the little patch of coca, usually within the very village limits, is one of the most conspicuous sights in every Kagaba hamlet. The women have charge of picking and drying the coca leaves, although they do not use the sugi themselves. Boys begin using it between the ages of nine and twelve.

The only ill effect of coca that I could notice on these men is that their lips are stained dark brown by the lime. On the other hand, they all have excellent teeth, and my dentist suggests that the lime they eat may account for this fact. However, the women seem to have good teeth, too. The lime is made by slaking shells gathered on the ocean beaches. You could hardly give a Kagaba a more valuable present than a quantity of these shells, and we regretted that we neglected to bring any. One Indian to whom I gave a piece of chewing gum spat it out, saying that it burned his mouth. I wondered if perhaps the coca and lime habit had made his tongue sensitive.

Kagabas use the sugi or poporo as often as an inveterate smoker in our land lights up a cigaret. The rattle of the stick in the poporo is the commonest sound in a Kagaba village, except the constant rumble of the river. All larger Kagaba villages are built beside roaring rivers of ice water.

The Kagaba-Arhuaco Indians are everything that the Goajiros are not. Even the region in which they live is ut-

terly unlike the dry, sandy, flat Goajira Peninsula. The Kagabas live in the cool and precipitous Sierra Nevada de Santa Marta, where the highest peaks, with an altitude of nearly nineteen thousand feet, have snow on them all the year round. One of the three highest central peaks (altitude 18,770 feet) was unscaled until the Thomas D. Cabot Expedition reached it in 1939. Mr. Cabot learned that an unheralded German party called the Deutsches-Kolumbien-Kordillera Expedition 1938 had climbed the central summit a few weeks before. It is a few feet higher.

The Kagabas are small, shy, and timid, with little muscular development. They are skinny as well as short. Some of the chiefs take more than one wife, but for the most part they are monogamous. They lead sedentary lives, hunting very little, depending for their living mainly on agriculture. Their country is the only one I know of where there are actually more houses than people. That is because of their custom that man and wife must live in separate houses, plus the fact that each man has several farms with two or more houses on each farm. By going up or down hill a few miles, the Kagaba gets a diet that varies from the fruits of the tropics to the vegetables of the temperate clime. The main crops are white potatoes, tomatoes, onions, *aracacha* (a native American tuber), cabbage, yucca, yams, sugar cane, and the two luxury products, coca (*Erythroxylon coca*) and tobacco.

The Kagabas almost never fight openly, but they are nevertheless much feared by Goajiros and Colombians for their knowledge of secret poisons and black magic. An important adjunct of their magic is the use by their medicine men of several very old wooden masks which have been treasured by their priesthood for countless generations. I knew that the wearing of some of these masks was supposed

to give a Kagaba shaman the status of a god, with power to cure sickness, stop floods or landslides, and perform other miracles. One of the objectives of my expedition was to get one—two, if possible—of the precious masks for the two museums which were employing me, the Museum of the University of Pennsylvania and the Museum of the American Indian, Heye Foundation, of New York.

The Kagabas could not possibly have Tairona blood in their veins. Their physical and moral type is too utterly unlike the descriptions left by the Spaniards of the muscular and belligerent Indians who caused them so much grief along the Coast of El Dorado. However, the Kagabas' lower territory slightly overlaps the upper territory of the old Taironas. And investigation of their culture previously made by Dr. K. T. Preuss indicated that their shamans, or *mamas*, as they call themselves, knew more about the Taironas than they admitted.

It would be difficult to find another tribe of American Indians in which so many phases of tribal life are the affairs of the males. The men weave the cotton cloth. The women make knitted bags of fiber, wool or cotton, but it is the men who make the thread. Men make the basketry and the pottery. Men do the planting, although women and children help with the harvesting.

Why do such small, shy, skinny little human beings live under the shadow of such huge mountains—always in the noise of such roaring rivers, within sight of such thundering oceans? Or is that why?

These hills are about one-third wooded and two-thirds bare. They are not so bleak as they look in photographs (where they suggest Tibet) because of the colors of the grass which covers them, and the bright sun. There are many large boulders, some of them as big as the native Indian

huts, and looking much like them at a distance. Some of the bare spots have been caused by erosion, but many are the results of Indian woodcutting.

Just outside of San Miguel we crossed a river, then went steeply up a hill set with wide flagstones by the ancient Indians to a width of about six feet. Ahead of us, on the left, we saw four circular buildings. The two larger had palm-thatched walls and straw-thatched roofs, each roof topped with a round structure of sticks and straw like great rosettes. These sticks represent the rays of the sun coming over the mountains in early morning. Such structures are found only on the temples of shamans and occasionally, as here, on the house of the shaman's wife. Ordinary dwellings have two clay pots at the peak of the roof of a man's house and one at the top of a woman's.

This place was Kasikiale. We saw no human beings. Hawkins had warned me that the Kagabas always fly from their villages when strangers approach. They must have seen us, miles below in the valley, struggling uphill. Doubtless their scouts from Pueblo Viejo had brought news that we were coming, even before we had left Pueblo Viejo. A quarter of a mile up a gradually sloping meadow, with a river roaring at our left below a cliff, we dipped down across a brook and swung uphill under a great wooden gate house which needed only a dragon's head to persuade me I was back in China. It was high enough so that we could ride through. After another steep climb of fifty feet, we came out on a plateau in the main village of San Miguel.

As we passed the first house, I had a feeling that a human being was moving furtively into the doorway. No other sign of life was in evidence except dogs, pigs, and chickens. Smoke drifted up through roof peaks. The Kagabas have no chimneys, nor have any American Indians until they have copied European architecture. Here and there a door was

open, but nobody moved. Hawkins and Ernesto went unerringly to the big guest house, and pushed open the door of three-inch-thick planking. We were in the middle of a large, damp, cold room. I swung my hammock, wrapped myself in a blanket, and curled into it with a bottle of *porto blanc* in my hand. I was tired and cold.

Ernesto put down a box opposite me and a few feet away. It was a box filled with provisions we had brought from Dibulla. On the side of the box, in stencil, were the words in big letters: "Stow Away from Engines and Boilers!" Incongruous! Oh, for an engine or a boiler here, with my teeth chattering! Here was this town, this fixed town, this town for many hundreds of years a town, a definite place of human abode. Here, about us, had gone on all the dramas of human existence except one—not the pull of wanderlust against the love of wife and child. The spirit of adventure is entirely lacking among the Kagabas. They have no curiosity about the world. It used to make them dizzy trying to figure out the number of *jornadas* (days' marches) I must have made to reach their country. They have no temptation to wander. Yet, here was this box labeled "Stow Away from Engines and Boilers!"

After we had been in the town about an hour something moved timidly from a house a hundred feet away. It was an old bent man, the same man that I had glimpsed moving into a doorway as we entered the village. The people of the village figured he was too old to be of use, so they had given him the job of staying behind to make contact with us. We gave him a drink of rum and a piece of meat and told him we wanted to buy a young bull or heifer, to kill it and make a *fiesta* for the whole village. (You people, with electric lights worked by switches and controlled by servants, you who live on the proceeds of coupons cut from papers called bonds—which means that your fathers or mothers

were clever gamblers—what do you think about this kind of a life?)

We told him to go and hunt up his *comisario*, as they call the political head of a Kagaba village appointed by the Colombian Government, after consultation with the Indians, for a term that varies from two to three years. *Comisario* really means "commissary"; commissioner would be *comisionado*. The old Indian said the *comisario* was away off on his upper farm in the hills. But in half an hour the *comisario* arrived. We could tell him by his red-tasseled, black cane with the silver head on it, if not by his red-tasseled manner. Pretty soon women began coming in, women laden with bags filled with vegetables or with babies. Their bags were held around their foreheads by bands. They always trotted. I never saw a Kagaba woman walk. She always trots, nervously. Her husband moves just as fast, but he shuffles. Like commuters coming home from the city, these people have their food to hurry to. They get it more easily than the workers in our civilizations, perhaps; they are more sure of it, anyway. But what do they have to lift them out of themselves? Nothing but their religion and occasional debauches with *guarapo* and rum.

A sporadic blowing off of steam is an essential without which the human mind cannot face the daily grind. It may be endured ninety years before death otherwise. But to get the products which give the release means sacrifice, means hard toil.

My passion to compare the sort of life I lead with the sort of life led by primitives, strangely different people in strangely different surroundings, never seems to die. We talk about the delightful simplicity of Indian life. It appeals to us when we go, jaded, to their country, but how long could we stand it?

Chapter Fourteen

THE KAGABAS

SOME OF THE BEST FRIENDS I HAVE had in my life were those I made in San Miguel. The Kagaba Indians are very friendly people once you penetrate their shyness.

It amazed them that I could have any interest in measuring their heads, faces, and noses. (What would we think of a stranger who came to a Connecticut village to request similar personal favors?) They did not know what to think about it until Hawkins suggested that I was using my calipers to determine their age. They do not know their own ages. So, when I finished calling off the measurements of an Indian to Hawkins, I would estimate his age and call that out too, to be recorded in my notebook. Generally they were pleased with the information I gave them. Occasionally a woman would complain that she was younger than I said.

They were even more amazed at my ability to take down their words in phonetic symbols and then repeat them with the correct pronunciation. It wasn't long before I had a vocabulary of two hundred words. In giving me these words they generally sang them. Theirs is a very musical language,

although slightly nasal, and they emphasized this quality in their speech when they spoke to me.

Among their commonest words are *shikishvelo* (how are you?), *henshigah* (how do you do?), and *napaybo* (friend). The *ay* is pronounced like the *a* in *Yale*, as it is in their word *hatay*, meaning father. Before long it was *napaybo*, *napaybo* all day long in our guest house. These people never ceased to express delighted amazement at my ability to pronounce Kagaba words correctly after hearing them once. (I did not try to explain my phonetic system. That would have been too much.) The few lower-class Colombians whom they meet in Pueblo Viejo scorn to learn any Kagaba, dubbing as "savages" a people far superior to them in mind and heart.

Everything worked very well. Juan Sico, the Comisario of San Miguel, and Mama Damian, shaman of the adjacent temple of Kasikiale, became my devoted friends. Every evening they came around and drank rum with us. The shaman preserved his dignity but the comisario got quite splendidly drunk. Most of our conversations were in the sort of bad Spanish I speak. The Kagaba's accent and knowledge of Spanish are usually as bad and as limited as mine, so we understood each other better than would have been the case had they or I spoken perfect Castilian.

We went up to Takina, which is almost as high in their religion and in actual height as Macostama, where we also visited. The important mama at Takina, Mama Asunción, was very friendly and drank our rum and ate our sardines. But first he carried the opened tin of sardines around on the palm of his hand for half an hour, not knowing what to do with it. José de la Cruz Dingula, a still more important mama at Macostama, refused to do more than come out of his *cansamaria*, where he had been making a noise

like a wounded bull as part of some bit of ritual. He gave us only a curt, cold greeting and sent words censuring the mama of Kasikiale for being too familiar with foreigners.

We returned to San Miguel again that afternoon, Hawkins and I both glad to be back in a warmer climate. Opposite our door a Kagaba mother was plucking lice from her child's head and putting them into her mouth. Kagabas think this the easiest way to dispose of lice. We had not been in the Guest House more than five minutes when Indians began to come in with things for sale. They were getting the habit. Chiefly, they sold us their bags of cotton, fiber, and wool, and their poporos. The mama brought in two mats made of palm leaf. They were from the big cansamaria at Kasikiale, about a mile north of the village, but he would not explain their religious use.

The next morning Mama Damian took us down to that cansamaria. The last word has yet to be written on the cansamaria. As Preuss says, the word is obviously of Spanish origin (from *Casa Maria*) and came into the language as the result of Catholic influence. There are two types of cansamarias. The larger type of these round buildings has a big *kuka ikaibue* (structure on roof peak). The smaller ones are about the size of a large Kagaba dwelling, with two pots on the peak. The first type is the home of the mama, in whom are combined Dionysian qualities of shaman and Apollonian qualities of priest. The word mama, which means "shaman," also means "sun." And a cansamaria is sometimes called a "house of the sun." The big cansamaria is also the home of the male novices whom the mama trains in ritual. The second, smaller, type is used by the mama and novices for ceremonial in addition to serving as men's club and sleeping quarters for bachelors. Women, except wives of novices, are not allowed in either

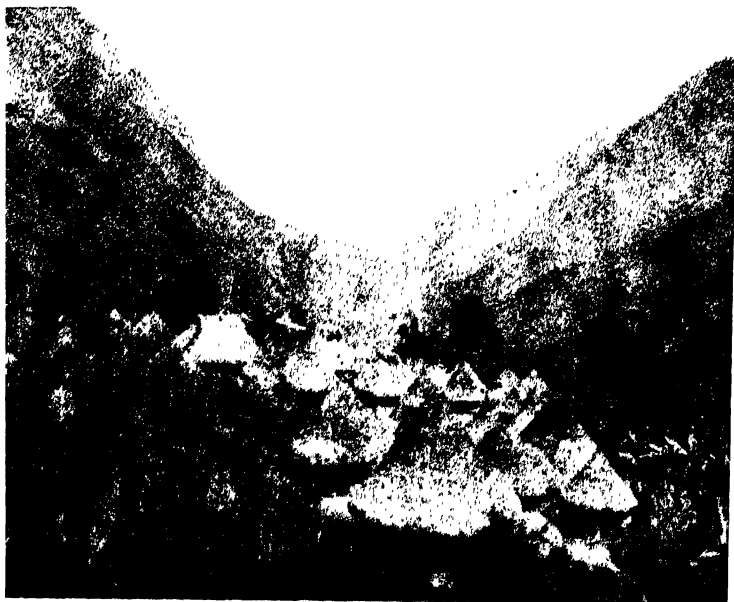
type of cansamaria. Favored foreigners may enter the smaller but not the larger ones.

The Kagabas believe in a number of gods and demons like Kalguasiza, the Mother of Rivers; Gauteovan, the All-Mother; Suzauban, Goddess of Sickness, etc. Their chief deity, however, is the sun. Zantana controls the rain and keeps the rivers from overflowing. His duties are important to the Kagabas, who believe that the way to reach the sun is to float down the river to the sea. (In some manifestations Zantana is also the Master of the Underworld.)

With the help of three or four drinks of rum from Hawkins' tin army canteen, we persuaded Mama Damian to sell us several things from the cansamaria of Kasikiale. When the canteen was empty, the comisario drew the mama aside. Then the comisario, who spoke Spanish a little better than the mama, approached us. He explained that the mama was afraid the gods would be angry because of the selling of the cansamaria's mats to us "travelers from a strange country," and that, for our welfare as well as his own, he would now undertake some business to please the gods.

The affair required that we refill our flask with rum. An Indian was dispatched back to the main part of the village, carrying the precious flask and a note from me to our cook telling him to fill it. The Indian was about fifteen minutes going to the Guest House and returning. Each Kagaba village maintains a Guest House, by the same agreement with the Colombian Government under which the Catholic churches are built and maintained. The Guest House is rectangular and usually about the same size as the Catholic Church. Except for the rare visits of the Catholic priest and travelers like ourselves, it is never occupied.

While the man was gone for the rum, we walked around



(top) Kagabas looking at pictures of themselves made by the author six years earlier and reproduced in the German magazine, *Die Woche*.

(bottom) The village of San Miguel.



The bow is the child's toy to the Kagabas.



Kagaba medicine man wearing mask representing a friendly sun god.

the outer circumference of the cansamaria with the mama. A few meters to the northwest of this building there were some very slight, roughly circular patches of soil, about a yard and a half in diameter. Several of them had two or three stones about the size of a man's head lying on them. The mama explained that these barely discernible excrescences ("mounds" is hardly an accurate term) marked the graves of former mamas.

Hawkins and I plied him with questions as to the mode of burial of these mamas. Common people are buried in the free ground in a flexed position, but he said the mama is buried in a *tinaja* (large pottery jar) and is placed in it in a sitting position, fully clothed. The body is wedged into position, pieces of smaller jars being used for this purpose. Each mama has his *tinaja* made when he is a certain age, and the urn is put away in a safe place until he dies. None of these Indians know their ages in years, as I have explained already. We could not learn at just what age a mama has his *tinaja* made for him. The mama who was our informant looked about fifty-five or sixty. He said his burial jar had been made several years ago.

His account of the modern burial method was interesting to Hawkins and me. The method he described closely resembled the mode of burial which apparently had been used by the Taironas, judging from the excavations we had made in the big cemetery at Gairaca Bay. His reference to the use of bits of broken pottery to wedge the body into a firm sitting position explained why we had found far more sherds in the urns than could have been accounted for by the breakage of the covers.

We were told that a mama's *familia* (family) is buried near him in smaller jars. We were pressing the mama for details as to just what he meant by *familia* and Hawkins

was asking him if he meant *parientes* (relations), when the Indians returned with the rum.

The comisario ordered us to re-enter the cansamaria. This headman was always pleasant to us, but he seemed to enjoy showing his authority. Several times, during the subsequent proceedings, he gave us commands before the slow old mama got around to it. The mama did not seem to resent his doing so.

Mama Damian told us to sit down on two small wooden benches which his son, the assistant mama, placed at the northern side of the northwest door. All cansamarias have two doors. They are always opposite each other, but there seems to be no uniformity about their relation to the points of the compass. I was told to take the outer bench.

The mama placed the ridiculous army canteen in the very center of the dirt floor, directly under the apex of the thatched, conical roof. This canteen had four distinct sides. It was much thicker than the flat, rounded canteens I have seen in the American Army. The mama touched the four sides of the canteen with a bit of white cotton fluff, grown by the Indians for making their garments. The cotton had been handed to the mama by his son.

Besides the persons already mentioned, there were present six or seven of the bachelors who habitually slept in the cansamaria. They sat back in the shadowy rim of the building at the north and south, rattling their poporos, but not talking. They did not seem much interested. Later, they stopped using their poporos and became much more attentive.

The mama straightened up and walked past me out of the building. From my seat, I could see him go to the nearest grave, which he had told us was that of the last mama to die before his own term began. I thought I heard

him mumbling something, but I am not certain of this. He returned and made circular passes around the flask with his right hand, which still held the small bunch of cotton.

Then he went out the same "door" again. There was no gate of solid wood, as in our guest house, but rather a structure of upright poles lashed together and swinging in loops of *lianas*. He did not go quite to the grave this time, but stopped and faced north, looking toward the sea and down the valley by which we had reached the village. Returning rapidly, he stood beside the flask; then he moved around it, stopping at each of the four sides. As he took each stance, he threw his arms out slightly.

Then out he went again, by the same door, and stood over several graves in succession—eight of them, I thought. Coming back, he stopped before me and touched my lower left leg, my left hand, my left shoulder, my lower right leg, my right forearm, and my head—in that order—with the hand which held the cotton. He did the same thing for my assistant. Going out again, he put the bunch of cotton on the grave of the last mama who had died.

The assistant mama reached up to one of the slanting roof poles near the southeast door and took down a bit of a dried herb. He gave it to his father, who mumbled over it as if blessing it, before ordering us both to kneel, between the flask and the northwest door. Holding the herb before him he walked about us describing an imaginary square containing us and the flask—but keeping the hand with the herb always toward us, so that he himself was outside the square. Now he touched me, then Hawkins, with the herb; he touched the same parts of our bodies in the same manner and in the same order as he had done with the cotton, except that he did not touch our lower legs, which, since we were kneeling, were under us.

He told us to return to our benches. When Hawkins started to take the outer bench, on which I had been sitting, the comisario ordered him brusquely to the other one. Followed by his son, the mama went out toward the northeast of the building, where I could not see him.

During the last few minutes the other Indians in the cansamaria had been very quiet. Now they relaxed, talked to each other, and helped themselves to the coca leaves in the small colored pouches at their sides, and to one lick of the poporo sticks after dipping them into the gourds of lime.

The mamas were out two or three minutes. When they returned, the son went back near where the comisario was sitting, a bit forward of the others on the southeast side. The old shaman knelt at the southeast side of the flask and shook his right hand at it gently. He repeated this performance at the northeast side of the flask, and finally at the northwest. Obviously, he had neglected the southwest side: but it may be that this was an error, as he had already had several drinks of rum from the flask.

I was made to approach the flask and kneel at the south of it. Hawkins was placed at the north of it, but was pulled over to the northeast by Comisario Juan Sico, who seemed to be trying to put him in line with a large roof-supporting pole behind Hawkins. The headman then pulled Hawkins somewhat back from the aluminum bottle, perhaps with the thought that Hawkins ought not to be allowed so near to it as I.

Passes by the mama were in order again. He half shook the herb at us and drew an imaginary square about Hawkins, myself, and the flask, but less accurately and carefully than before. I had taken my hat off on entering the cansamaria, but all this time Hawkins had kept his head

covered. The comisario now interrupted the ritual to make him take off the hat, a dirty old felt affair. The mama touched me several times with the palm of his hand, on the chest and top of the head alternately. Hawkins received the same treatment.

We were then told to resume our seats. The two mamas and the other Indians left us by the northwest door and turned to face the sun, while rattling their poporos. They stood in line, northwest to southeast, the head mama in front. I asked Juan Sico if I might follow them, and he assented.

After a minute or so they broke formation and went back into the cansamaria in informal order. The mama asked Hawkins to fill the little metal cap of the canteen with rum. Wetting his forefinger in it, he touched the posts of the northwest door with rum, first making me take my hat off one of the posts. The assistant mama followed him and with his palm rubbed the posts where the rum had touched them.

Now the Kagabas all knelt and indicated that we should do likewise. The comisario handed me the canteen and told me to fill the cup-top. After I had done so he told me to taste its contents, still kneeling. Then he took it from me and drained the contents, which about equalled those of a wine glass. I suddenly felt as if I were hypnotized. I felt I would do anything I was told to do and for a moment I was quite frightened. Probably it was merely autosuggestion.

As we knelt we watched the mama and his son alternately standing and kneeling side by side. They were singing continuously now. The words were mostly Kagaba, but I caught a Spanish phrase here and there. Each time they kneeled they put their hands together, palm against palm and under surfaces of fingers of opposite hands pressing

on each other but not interlacing. Hawkins was ordered to carry a drink to the mama, and to taste it before the shaman drank it, as I had done with the comisario. But Hawkins did not kneel as he drank, and it was obvious that his failure to do so was considered a *faux pas*.

The cup was refilled three or four times, either Hawkins or I putting a finger in it before it was drained, usually by the comisario. Next, the comisario dipped his finger into the cup and rubbed rum on my forehead and nose and then on Hawkins' forehead and nose.

When this had been done, Hawkins refilled the cup at the bidding of the assistant mama. The young mama took the cup to the center of the room and stood there by himself, wrinkling his brow and muttering a Kagaba incantation or prayer. Eventually, he went to different parts of the room, repeating the same ritual. He was much slower about it than his father had been, perhaps because he did not know the formula so well. Finally, he came back to the northwest door and knelt beside his father, who remained sitting on one of the small benches while the two of them sang. The words of their song seemed to be largely Spanish, but were so mouthed and wailed over that Hawkins and I could not catch many of them. The words *mi hermano* (my brother) were heard again and again, however, as the mamas worked themselves up until tears stood in their eyes. They sang for perhaps three minutes. Then the assistant mama drank the last cup of rum with which he had touched the posts, and that ended the performance in the cansamaria.

We were told to go outside. A procession was formed, in this order: the comisario, myself, Hawkins, then three of the other Indians who had been in the cansamaria, with the mama at the rear. (The assistant mama and two or

three others had remained in the temple.) The procession moved, in caracoling fashion, among the graves. All the while the Kagabas uttered phrases in their own tongue, apparently invoking the dead or the gods. At last we reached the hedge which separated the holy enclosure from the trail which came up from the lower valley. We stopped at this hedge, and the comisario asked whether Hawkins or I had entered San Miguel first. When we told them that Hawkins' pony had been a few yards ahead of my horse as we passed through the big wooden entrance gateway, they told us to change places, so that Hawkins was ahead of me. As we were about to start, a young Indian who looked half-witted said he must go ahead of Hawkins and stepped in just behind Comisario Sico. The comisario and mama smiled and let the boy hold that post. In this order, we marched into San Miguel, to the very door of the Guest House.

The Indians entered with us and, of course, demanded another *traigo* (draft of rum) all around. We gave it to them, but explained that we had very little rum left, whereupon the comisario ordered all of them to get out except the mama. When they had left, he asked for "*un traigo mas*" for himself and the shaman. It is noteworthy that although sugar cane is one of the chief products of Kagaba agriculture and the Indians all love rum, they do not make any. Invariably, they use the cane juice from their presses to make sugar for trade with the Colombians, keeping only the dregs or guarapo for themselves.

The comisario and the mama now threw off all dignity and became very friendly. The mama explained that he had feared the gods would be angry over our purchase of the two mats from the cansamaria and might visit misfortune on us. So he had performed the "four wind cere-

mony for travelers." We might walk through the entire world now, he explained, without fear of breaking an arm or a leg in a fall from a precipice, and without any danger of being buried by landslides, which are common in this country.

The one thing, above all else, which the museums wanted me to get, was one of the few wooden masks which the Kagaba mamas wear in ceremonial dances, and which they believe give them the power of gods. With the help of a little rum we got the mama to put on a dance which he performs at New Year's; and, to my intense excitement, he produced a wooden mask which was so old it had worm-holes in it, although it had been guarded carefully for untold centuries. It was donned by his son, the assistant mama, who then came up and peered at Hawkins and me intently.

"Who am I?" he questioned, in Spanish.

We had been coached to say, "I don't know."

"Well, I know all about you," he continued. "I am God and I know everything about you." Then he stalked out of the door of the temple and began his dance. He beat an old wooden drum, and a copper bell rattled on his ankle. It was a silly grasshopper sort of dance, the mama laying one foot down, with the ankle a little sideways, three or four times, and then the other. But who knows what deep significance and what historic past this dance may have?

Because it was a dull, misty day, I was afraid none of my photographs would be worth much. As a matter of fact, they all turned out fairly well, both movies and stills. Also, it was the only time on this entire expedition, after leaving Dibulla, that I got any pictures of myself. Not that I wanted any, but the years have taught me to be canny.

I know that if an "explorer" comes back and says he has been to such and such a place, and shows his pictures and is not in them himself, people raise the question: "How do we know he went there at all?"

The trouble was that Hawkins has a peculiar difficulty with his eyes and never could find an image in the finders of my camera. But here I gave the camera to the drunken comisario, and just by accident he managed to find me in it. Although the impression is very vague, because he used the wrong stop after I had fixed the right one, nevertheless, it is evidence that I was among the Kagabas.

I am not ready to say that there is nothing in Kagaba magic. I have heard from too many apparently reliable people what Kagaba magic has done to dismiss the claims made for it as promptly as I am willing to dismiss the claims made by our parlor-trained "magicians."

When Hawkins was at Palomino a few years ago with the English botanist Wollaston, he asked for news of his wife. He had left her alive and well in Santa Marta two months before.

"Your wife is dead," the mama told Hawkins.

"When did she die?"

"She died ten days ago, at five o'clock in the morning."

Hawkins was worried for the rest of that trip.

When he got home he found that his wife *had* died, and on the day mentioned by the mama, but at two o'clock in the morning instead of five. There is no telephone or telegraph service between Palomino and Santa Marta. Hawkins' wife was at Bonda, a suburb of Santa Marta, and a good fifty miles from Palomino as the crow flies, or a hundred and fifty by the trails men must follow. There had been time, of course, for an Indian to come over the mountains from Santa Marta, but these Indians travel very little. They

are so averse to travel that they have one man who earns an easy living by virtue of his willingness to undertake missions to the Colombian towns for the rest of the tribe. Of course, it is possible that news of affairs in Santa Marta might reach the San Andres Indians, a pueblo allied to the Kagabas and about thirty miles away on the south side of the mountains. The Kagabas live on the north side. The San Andres folk occasionally visit Santa Marta, and communication by courier between these two tribes is not at all unusual. But it is difficult to imagine the Indians having enough interest in Hawkins' wife to check up on her. Of course, Hawkins was visiting the Indian country, where all strangers are suspect.

As to the Kagaba proficiency in the use of poison and magic you hear all sorts of stories. There is a pretty well authenticated case of the rape of a Kagaba woman by some men from a little Colombian village on the western slope of the mountains. When the men got through with the woman they turned her loose to roam back to her own village. Her townsmen promptly killed her. They had no vindictiveness toward her. They realized that she was the victim of an accident, but they simply said: "She's no use to us any more."

The four men who had raped this Indian woman all lived on the same street in that Colombian village. A few weeks after the woman died an epidemic of a painful and mysterious skin disease attacked everyone living on that street. Some died, including one of the ravishers. So I have a certain respect for Kagaba magic, and when the old mama told us what miracles he could perform with his mask, I felt properly impressed.

The Kagaba Indians take a bath every day, but they seldom wash their cotton tunics, which become very dirty.

They are extremely modest. They will not permit themselves to be seen naked, even by another Indian of the same sex. Hawkins, who has a curiously lewd streak at times (it may be anthropological interest), had told me that from this fact he had deduced that the Kagabas had a racial sexual inferiority complex of which he spoke frequently. I am not so sure. No male Turk will allow another male Turk to see him naked, but has anyone ever suspected the Turks of such an inferiority complex? It may, however, explain the Turk's repressive attitude toward his women.

The land in the Kagaba country raises very good crops. The Colombian Government, which has a far more intelligent Indian policy than our government, will not allow foreigners, or even Colombians, to settle within the limits of the Kagaba reservation.

We had collected about everything there was to get at San Miguel. The Indians had sold to us so enthusiastically that few of them had enough knitted bags left for their own needs. We had a drum, and other esoteric things including a lot of poporos, and a lot of *tamils*, smaller gourds, in which the natives carry the liquid tobacco which they eat. We had tried in vain to buy the mask. It seemed useless to try further. Just then the mama's son came in. Having found that with some *doncellas* (unbored beads) which we had found in the Tairona country I was able to buy an Indian shirt, I showed him two little gold bells in the shape of frogs that we had dug up at La Cueva. When he saw the frogs, he went into a frenzy. He ran out and sent for his father.

Old Mama Damian was in an ecstasy of admiration. "Those frogs," he said, "were worn on the shoulders of the old Tairona mamas when they danced the New Year's dances. I would give you almost anything for them."

"Would you trade the mask for this frog?" I asked.

"You have two gold frogs but I have only one mask." He looked regretful. I saw that he would not.

"Would you trade the mask for the gold frog and a brand new machete like this one, in a leather case with fringes on it?"

He seemed to be slipping for a minute, but he caught himself. I realized it was no use. For him, selling the mask would be like selling God.

"You see," he said, "we cannot make these masks any more. They are so old that we do not know who made them. We have no stories about them. We only know that they have come down to us from our ancestors, and that we have nobody with us today in the tribe who can make such things. The gold frogs are very wonderful. We cannot make them either. But it would not be right for me to trade this god for that frog, though he was a god, too, a god of rain. But I do not know much about him; I do not know how to use him. I have grown up with this mask god. I know what to do with it. I know how to make it cure disease. I cannot let it go. Maybe the mama at Palomino will sell you his mask. I am sorry. I would give almost anything for one of those frogs."

It was hard for me not to give him one of the frog bells. He was pathetic in his desire for this object, which had meant much to his forefathers. If I had been working for only one museum instead of two, I would have given him one of the frogs. If I had had three frogs, I certainly would have given him one. But, like him, I had to obey the sense of duty trained in me by years of tradition. My first duty was to the museums I represented, just as his first duty was to the religion which had nurtured him and now gave him his living.

Curiously enough, the Kagabas are the enemies of living frogs, which they are constantly hunting and killing. They believe that if a frog croaks in a hut, someone in that hut will soon die. They also believe that if a frog lays its excrement on a human being's stool, that person will die.

The next morning we started to go back to Pueblo Viejo. Then, more than ever, we appreciated to what degree the Kagaba man, the skilled laborer, has left the unskilled labor to his wife. She carries the burdens. I had given my moving picture camera to an Indian, who had a bull that wasn't very heavily loaded, and asked him to put it on the beast. I then went ahead, down those mysterious stone steps over the hill outside of San Miguel, the stone steps which G. Elliot Smith would call *megalithic* and mistakenly regard as evidence that all civilization descended from Egypt.

At the bottom of the steps, I crossed the bridge and took a picture of the bulls as they came over. Then I dropped the key to my motion picture camera through a crevice in the bridge. Ernesto stripped and went into the water, showing the white blotches on his back made by the disease called *pinta* (*caraate*)—a slightly contagious disease prevalent in Colombia, which makes black men look as if they were half white, and makes white men look half yellow.

I was waiting while the bull train passed, and to my surprise I found that the Indian to whom I had given my camera was not carrying it. Nor was his bull. Instead, it was on the back of the Indian's wife just below the sack holding her eighteen-pound baby. She was about four feet nine, and weighed about eighty-four pounds. And she was wielding a big stick, with which she was goading another bull along his course.

Ernesto miraculously recovered the key. I walked fast

and passed the bulls again. Then I came to a strange place which I shall always remember, particularly when I am hot or thirsty. The water came trickling down a steep rock, about a hundred feet high, and ended in a delicious little pool about the size of a big bath tub. I took off my clothes and got into the pool. It made my feet feel better. My socks were rather crude things which I had bought in an army store in France during the First World War, and my feet had been blistering. Just then six Kagaba baggage bulls came by, driven by four men going light and by two women with big burdens on their backs. They all averted their eyes as they saw me bathing. I stepped out and put on my clothes. I know that Hawkins was still behind me and I figured it would be pretty good fun to beat him into Pueblo Viejo. I had had double pneumonia a few months before, and I was still not very strong. I had noticed Hawkins several times when he, three years older than I and seventy pounds lighter, had been able to do some feat of strength beyond me, such as turning over a great boulder, with a smooth under surface, which had been an ancient mirror. (See Chapter Seventeen.)

We dropped into a little settlement of a few native huts. We knew we would have to go uphill nearly all the last part of the trip, until we were about a mile from Pueblo Viejo, when the going would be downhill. As we began to go up, I began to get tired. There were a lot of streamlets running down the side of the rocks, through wet, mossy substances, and I stopped at every one and took a drink. Gradually, the bulls were passing me. Finally, even Hawkins passed me and grinned at me with dry, caked lips.

I started again and was now out of the bush and had to walk in the sun. I felt as if I were being hit on my spine with a hammer. I had enough sense to put my pride aside.

"Let him go," I said. "I'll be the last one into Pueblo Viejo, but I'll get there. That's all I care about." Just then I heard a scuffling and looked around and saw the big bull coming along, driven by the little woman who was carrying her baby and my moving picture camera, each weighing eighteen pounds. At this instant, she took the baby out of the sack on her back supported by a band around her forehead, and began to nurse it. I sank back at the edge of the trail with a semi-delirious gasp. I was pretty well shot, and sure now that I would never get to Pueblo Viejo.

"Here come the nursing mothers," I said. "I guess that is the last touch. If a nursing mother, weight eighty-four pounds, height four feet nine, can carry her baby and nurse it and carry my moving picture camera and drive a bull and beat me from San Miguel to Pueblo Viejo, am I worthy to have had more flags from the Explorers' Club in New York than any other member?"

I got up after ten minutes and staggered to the top of the last hill, where I had to rest before I started to go down. Going down a very steep hill with a lot of rolling gravel around your ankles is no easy task. I stopped at every little stream to thank God for the lot of them. When I neared Pueblo Viejo, I evidently started to go out the wrong way—across an open field—because they sent three or four boys yelling at me to bring me around the other way across the stream, and up through outpost native huts. When I reached the hut which we had used as headquarters before at Pueblo Viejo, I found it filled with a ring of Indian women, each nursing her baby; and Hawkins, losing his lunch and looking very pale.

He had beaten me in but he had lost his lunch. I had taken my time and had not lost my lunch. The nursing mothers had beaten both of us.

Suddenly it began to rain. The nursing mothers stopped eating the lice which they picked from their babies' heads, put the babies away from their breasts back into the sacks on their backs, and went out to tether the bulls under trees as protection against the rain. Each of these mothers had carried about sixty pounds, to the forty pounds each bull had carried. They had been trained by their husbands to think that they must carry more than the bulls. The Kagaba men take their animals up to the snowfields every few months to rid them of parasites, but they never give their wives any vacation. How did the Kagaba men accomplish this? If you have women who are religious, and men who monopolize the priesthood, I understand how it can be done. I guess that's how the Kagabas do it. All the mamas are men.

Chapter Fifteen

GOD IN THE MOUNTAIN

THREE DAYS LATER WE WENT TO Santa Rosa, a Kagaba village just over the sandy mountain to the northwest of Pueblo Viejo.

Santa Rosa was considerably smaller than San Miguel. Nevertheless, it had both its cansamaria and its Catholic Church. The key to the church's padlock, here as in other villages, was in the keeping of the comisario. Cansamarias have no padlocks. There was no mama at Santa Rosa, and the oldest male inhabitant conducted some of the ancient ritual in the cansamaria.

Santa Rosa showed many signs of its proximity to the outside world (represented by Pueblo Viejo) in the substitution of Spanish ways for Kagaba. The Guest House had two quadrangular windows, for example. Man and wife often lived in the same house in Santa Rosa, breaking the old Kagaba custom of separate houses for spouses. The only Kagaba dishonesty I encountered occurred here. The comisario broke an agreement he had made with us concerning the price of bulls. And the old man who had charge of cansamaria ritual accepted and drank rum stolen from us by a worthless Colombian boy who had attached himself

to us at Pueblo Viejo against my wishes. When we made inquiries on missing the rum in the morning, the boy denied everything but the old man confessed his part in the debauch. We sent the boy back to Pueblo Viejo.

The confession of the old man was typical of Kagabas. If they ever do steal, they are prompt to confess. They dislike dishonesty so much that no thief could count on a Kagaba accomplice not to give him away.

We learned quite a lot about beads at Santa Rosa. We hired a young man to make a Kagaba costume out of native cotton, which we had brought from Pueblo Viejo. He wore a bracelet of black vegetable seeds on each wrist. These bracelets are called *ubanjushi*. They had been blessed by the mama of San Miguel, and were considered charms against snakebite.

We found that here, as in San Miguel, the unbored beads we had brought from Tairona graves were greatly valued. The chunky shaped carnelians called *gusanos* (grubs) came next in order of appreciation. Any *vivos* ("live ones," or shiny beads) were valued more than the *muertos* ("dead ones," or dull beads).

I have never before heard of an anthropological expedition trading its surplus archaeology for ethnology. Yet, many of the things we acquired from these Indians, including the male tunic and female blouse and shirt which were to be made for us at Santa Rosa while we went to Palomino, could not have been gained in trade for anything except the relics of the Taironas, cultural ancestors of the Kagabas. Of this cultural connection we no longer had any doubt. Certainly, the Kagabas are quite different, physically, from the descriptions of the Taironas left by the Spaniards, but certainly they have inherited a good deal of the culture of the "El Dorado" people. Their understanding and

use of the Tairona beads in their several forms, their veneration of the golden frogs and their understanding of their function as rain gods, and the practice of burying Kagaba shamans today just as Tairona priests were buried, are all important cases in point. We hoped to find out more about this relationship between the two peoples when we reached Palomino.

We spent a week making an ethnological collection at Santa Rosa and collecting a few anthropometric data. Then we shipped our collection back to Pueblo Viejo and started for Palomino, which is in the opposite direction.

Ernesto had gone back to Dibulla to fight a duel over his ex-wife. Our cooking was now being done by two Pueblo Viejo boys, coal-black Pablo and café-au-lait Roberto.

All day we could see ahead of us a huge mountain like the backdrop of a theater. Finally, at two o'clock, we were at the real foot of it, not simply at the foot of the outlying hills which, at a distance, had merged with it. Everyone was breathing hard now; every animal and every man, even the Indian man, Dionysio, who had joined us at Santa Rosa. He was a tall, handsome, willowy fellow, whose name suited him well. You half expected him to stick a garland in his hair. He had joined us for no reason except the unusual reason that he was one Kagaba with a spirit of adventure. He was also the only Kagaba I found who did not chew coca leaves, and he was one of the very few who smoked tobacco.

"Buey, buey (Bull, bull)," the men would shout at the pack animals. They took their tails, close to the roots, and twisted them to make the poor creatures go on. The bulls' tongues hung out and their nostrils were distended, and the sweat rolled down their sides. "Buey, buey." Pablo or Roberto, Hawkins or Dionysio would take a sharp stick and

jab it into their rumps. The mules did better because most of the time now Hawkins and I were walking. It was too difficult to try to stay on the backs of the animals on these steep ups and downs. Although we were going up the main mountain, even here there were sudden little declivities that might easily cause falls over slippery stones. I certainly could not hang onto my elevated seat, and Hawkins thought it more prudent to get off and walk.

At about four o'clock, in the midst of the mountain clouds where the leaves dropped wet on us, we reached the top. Then we all began to run. Just like a lot of boys, we ran all the way down on the farther side. So did our animals. We ran across one more roaring stream, and then up about a hundred yards to where there was a hut on an open hillside. In that hut, we were to spend the night.

During the evening, I was talking about a detective story I had once read.

"What's a detective?" asked the Indian.

"A man who catches criminals."

"What's a criminal?"

"A man who does wrong."

"What's wrong?"

I threw up my hands. The Kagabas have no crime, consequently no detectives. They have no stealing, no lying, no murder. They come nearer to practicing the Christianity that Jesus Christ preached than any people I have ever seen. In two or three of their villages they do have a small hut, which corresponds to our jail, but it is used only to lock up drunks until they have cooled off. The drunks are put in stocks there. You would not need a detective to learn who the drunkards are.

The morning was clear and cold. The hut was only half a mile from the base of the last, steep, main lift of the

mountain called Cuba (pronounced *Cooba*). It is a noble mountain. At first, the upward slope was gradual, through a grassy field. It soon became very narrow and slippery, where the feet of bulls had turned up the black clay. It grew steeper. The bulls and mules zigzagged and began to pant. It was impossible for Hawkins and me to ride.

Walking behind our mules, we reached a level stretch, an eighth of a mile long but only a few feet wide. That was a relief, at first, but it was like crawling along the edge of a knife blade. I was sorry my altimeter was broken. I could only guess our height. Below, on each side, was a great valley. From these abysses, soft white clouds floated up to us. One enveloped us for a minute, then rose and hung twenty feet over our heads, leaving us visibility but no sunlight.

One misstep would send a bull and his baggage rolling to smithereens. The fat, gray tongues of the beasts hung limply from their frothy mouths. Their sides were heaving piteously. I kept well behind them, stepping in the grassy spots, avoiding the smooth bare ones, breathing very hard, feeling the effects of the altitude, as the bulls did. Fog swirled up alongside, cloud masses racing us to the top.

The fog was lying all around us like a great white friend. It hid everything below us. For a long while, we seemed to go along a more or less level ridge. There were few ups and downs. Occasionally, there were a few bushes to pass through, and we felt the fog, softer than rabbit fur, thrown into our faces off their twigs. Fog, fog, fog. God is a fog!

It wasn't exactly warm. We were about seventy-five hundred feet up. Sometimes it was raining, and sometimes the fog seemed to permeate our skins.

The big black bull in the lead stopped in discouragement, which halted the others behind him. The men let

the brutes rest for a minute while they tightened their belts, scraped the mud off their boots, and got set for a battle.

The overhead cloud slid away from the sun. Another huge one, like a mass of *blanc mange*, edged up toward us from the east. As we climbed, it rose parallel with us. Before we had gone fifty feet, we were bathed in sweat.

"God in the mountain." I thought of that old-fashioned frontiersman's oath. God was here if ever I saw Him on this earth. God was on the steep, clay slope over which we four-legged and two-legged creatures panted and slipped and fell. God was in that cloud coming toward us, gleaming white in the sun. Now it was around us, as soft and as still as snow.

We panted through the still softness—panted for a hundred more feet and then stood still to catch our breath. When we stopped panting everything was even more still, with a stillness you never find on the earth. You find it if you hunt the sky in balloons (airplanes are all noise). We were not on the earth; we were in the clouds, in the fog of the mountains. God in the mountain.

"God is a fog."

"No, he's not, he's the sun on a muddy river."

"God is a fog."

"No, he's not, he's the sun on a buzzard's wing."

"God is a fog."

After fifty of these halts, at last Hawkins said: "This is the top."

I couldn't tell it, except that the ground was nearly level. I couldn't see more than twenty feet. The men loomed like ghosts of men, the bulls like ghosts of bulls.

The descent of this topmost peak of Cuba, on the other side, was harder than the ascent had been, partly because

it was steeper, but mainly because it was all rock. The trail was carved in rock, and it kept winding under great overhanging boulders. (If one of them came down, it would be good-bye to this little expedition!) Then, the trail would emerge on another boulder, with nothing under it for hundreds of feet but space and fog.

Finally, we came down onto a *cuchillo* (knife blade) as they call these sharp, steep-sided ridges in this country. There were little ups and downs and occasional puddles, but as long as we stuck to the trail it was easy. Charged with steering that incompetent bull, Sapo, Pablo and I dropped far behind Roberto, Dionysio, and Hawkins. I could tell by the way Hawkins was traveling that he had an objective. Eventually, we caught up with them, and found the objective. Hawkins and Dionysio and Roberto were sitting under a thatched roof, without any walls, supported by four poles.

"From here on, it is straight downhill into Palomino," said Hawkins, walking out of the shelter of the thatched roof.

We began to go down hill fast, over a muddy, clayey trail, with dead trees fallen across it, and branches switching us in the face. I got off the mule. I didn't, literally, hold to his tail, but, figuratively, it amounted to that. He kicked mud into my face all the way down that hill and several times I skidded and slid against his rump. We ran down hill for about two hours, the mules constantly going up to their necks in deep, dry ruts which had been left by floods, and having to be pulled out by their tails. We came out on a ridge which was cleared of brush. Away off to the northwest where Hawkins was pointing, I saw a lot of little gray conical things like beehives.

"Palomino," said Hawkins.

I never have seen anything made by man more remote from man, closer to God, and more entirely satisfactory than that first view of Palomino from two thousand feet above it and ten miles away, over tumbling rivers and morasses which would destroy us, surely, before we reached it. Palomino, I guess, is my *ultima Thule*, my "Farthest North." It is where I want to end my days, and probably I shall never see it again. Palomino is the place where human beings actually seem to have accomplished a rendezvous with God. The fact that they are Indians is not important. They might have been Negroes or gypsies. They never could have been Englishmen or Danes, who are too fond of meat; nor Jews, who are too fond of cities. Yet, Palomino is a town.

The trail led into the woods again and then descended over a series of great boulders, winding this way and that, first through deep grass and then through short grass over a dark brown soil. At last we reached the river, crossed it over slippery rocks, and got thoroughly wet. Then we began a trudge for about two miles, up to a fairly high bank just below Palomino but on the opposite side of the stream. There were a few huts on our side, and a few Indians. We were anxious to cross quickly, for the river was rising.

We put a little stick in a sandbar to measure the rise of the water. In five minutes it rose an inch. That would not do.

"There's a house on this side where we can sleep tonight," suggested Dionysio.

We decided to do this, and shouted our decision to two Indians who were watching us from the farther bank. They were crouching beneath the projecting stub of a bridge, all that had been left by the flood of a month before.

I never shall forget the little hut where we spent that

night. I don't know why I was so happy there—unless I am a throwback to the cave men who felt safer and cosier in little holes. I felt the same way one summer when I lived on a small sloop. When I shut the cabin door behind me, no one could get at me.

The hut was square, not round like most of them. It was only by crisscrossing the hammocks and hanging two of them higher than the other two that we could get all four into the room. My ten-foot, blue-and-white Goajiro hammock could not have been hung at all if we had not let it sag nearly to the floor in the middle.

I slumped into it, at peace with the world. Here in this little smoky, dirt-floored hut was ineffable content. I lay awake a long while savoring that content. Cool night air came through the door across me. Star shine glinted on a far-off peak. A bright planet winked through a chink in the wall. Outside our bulls and mules crunched the fresh grass. The remote rumble of the river was a lullaby. If one ever could put a period to wanderlust, it would be in this valley. For the first night since I had been in Colombia I forgot where my pistol was. I didn't care.

We took our time loading the animals next morning. At eight o'clock when we reached the fording place the river was at about the height it had been when we left it the evening before.

A dozen male Indians were gathered on the farther side to watch us cross. Pablo stripped, waded up to his armpits in the brawling, clear current, and threw a small rope made of the hide of the young bull we had killed in San Miguel for a public fiesta. An Indian on the stub of broken wooden bridge caught the rope deftly, carried it down, and tied it to a big rock by the landing place. Our men gathered driftwood and built a raft for our baggage. Dionysio began driv-

ing the bulls through the river. Naked, with his black hair to his shoulders, he looked like a young girl.

We intrusted a bag containing kitchen pots to the raft for its first voyage. Pablo tied our end of the rope to the raft and, pushing from behind, commanded the Kagabas on the other side to pull. The current swept the raft downstream until it was dangerously near big rapids and boulders below the ford. Then, when the Indians began to pull fiercely, the raft bucked under water, and the bag would have been lost had Pablo not caught it. How he kept his footing with that flood nearly to his chin was miraculous.

We gave up the raft. The rest of the baggage was carried over on the heads of Roberto and Pablo. Our big kayaks (fiber boxes, two and a half feet long, two feet wide, and a foot thick) were balanced on their heads, and carried through the six-mile current, even where it was up to their chins, without use of the rawhide safety rope.

When we had carried everything over, we had to reload it on the bulls, even though the village was only a quarter of a mile away. Then, we found out why the Indians had been so brave in meeting us on the banks instead of hiding, as the Kagabas usually do when strangers approach their villages. They were just beginning a seven-day fiesta in honor of the patron saint of their village, San Luis, a fiesta which they have every fall. Each of these Kagaba villages has a Spanish name as well as a native name. Palomino is the Spanish name, San Luis the Spanish saint of this village, but the Kagaba name of the place is Taminaka.

The natives had just begun to drink guarraipo. In view of the fact that they were already starting on a debauch, it may seem that Hawkins was unwise to unlimber our twenty-gallon demijohn and give all the Indians a drink.

But I do not think it was an error. We had discovered that you cannot persuade these Indians to trade unless you give them rum. My instructions from the museums were to trade with them. The museums did not instruct me to give them rum; they left my mode of operations in the field to me.

I was more interested in food than in drink. I tried to buy a chicken from the Indians, and they said I could buy it if I could kill it. They were not able to catch the chickens at that moment. With my gamegetter I went out to an open field where the chickens were. I put a .41-caliber shotgun cartridge, loaded with number six shot, in the lower barrel, and when I saw a big red rooster I let him have it. I had taken the skeleton stock off the gamegetter, and I fired it as a pistol. When they saw the rooster keel over, the Indians were amazed at what they considered my extraordinary marksmanship. I hastened to pick up the bird and to give it to Pablo before they could find out that it had been riddled by a handful of small shot rather than punctured by one bullet. Another white man's miracle!

Pablo and Roberto cooked the chicken with rice, yams, yucca, and potatoes. The Indians crowded around watching us eat it. While we ate we traded with them. It is astonishing how soon you learn who are the outstanding members of a small community like this. Old Mama Miguel, the medicine man, was not present because he had been on the other side of the stream when the bridge was washed away and was too old to ford the river; so he had remained in his cansamaria in the hills west of the river. The comisario was a medium-sized, masculine, but slightly furtive-looking man, whom we may call Tuviata. I will not give his real name, for reasons which will appear later. He did not seem to be at ease. The biggest man in the community, physically as well as figuratively, was

Sylvestre Labata. He was still occasionally called by the ancient Kagaba term *zugukui* (chief). He was the richest man in the village, and the richest member of the entire Kagaba people. He was the one Kagaba who has seemed to care for money, and who had amassed it by imitating the white man's methods. Before we had known him very long, we decided that he must be at least eighty. We reached this conclusion by his reference to earlier explorers whom he remembered as having passed through the region. He was the only fat Kagaba, male or female, I have ever seen. "I eat plenty and good," he said. And he had what is a very rare adornment among these people, a beard. It was a straggly beard, made up of perhaps not more than forty or fifty hairs. A mere goatee, but he was very proud of it. That he was not vain of it was quite evident when he said frankly that mine was a better beard and that he would give me eight dollars for it.

He made his money in a peculiar way. Fifty years ago most of the Kagaba villages were in debt to Colombian traders who had cheated them. Labata told a lot of his fellow Kagabas that if they would follow him and found a new village, he would show them how to get out of debt to the Colombians. He refounded Palomino, which had been abandoned some years before. He sold the commodities which he bought from his fellow Indians to the Colombians. In doing so, he made enough to pay off the debts of all his fellow Palominans and himself. He paid their debts on the condition that the other Indians would stay in Palomino for life. They have all kept their word. Today Sylvestre Labata was the uncrowned king of a village of free Indians who had paid their debt to the white and black invaders, and who were not afraid to look any man, except Sylvestre Labata, in the eye.

Although it is more remote from any Colombian town than other Kagaba villages, Palomino in some respects seems more influenced by "white" civilization than any other village. More Spanish is spoken there than in San Miguel, and the Palominans don't call centavos "pesos" as many of the other Kagabas do. This is the result of the custom, fostered by Sylvestre Labata, of carrying the excess village produce downstream to the mouth of the Palomino River, where they barter for cash—not goods—with Colombian traders arriving in boats. This smart procedure of the Palomino Indians is extremely annoying to the cheats and usurers of Pueblo Viejo.

A hard-faced man of about thirty-eight followed Labata into the Guest House. He stood five feet six, weighed about a hundred and thirty-five pounds, and was one of the strongest men of his size I ever have met. I had reason to know, because he took an almost instant dislike to me, and was constantly trying to irritate me by grappling with me. He was the second richest man in the village. His name was José Mata. He had thin, straight lips, and hard, mean, brown eyes. He had the look of a man who was trying to drink himself to death, and his conduct fitted the look. We had not been long in the village when we found out what might have been a sufficient cause for his conduct. It seems that Comisario Tuviata already had won one of José's wives away from him, and was in the process of winning the second. The two men glared at each other whenever they passed, and by evening they were fighting.

The fourth outstanding Indian whom I remember was a nephew of old Sylvestre Labata. He looked like a student. In Europe, or the United States, he might have been a cleric or a laboratory scientist. He was very beautiful in a calm, inconspicuous way. His name was Antonio Sarabata.

Much of our baggage had been wet in crossing the river. Hawkins put a lot of socks, shirts, sugar, and miscellaneous articles including twenty rolls of toilet paper out to dry in the sun. The Indians, especially the women, were fascinated by the paper, and asked persistent questions concerning its use. For the first time, I saw Hawkins really embarrassed.

All that afternoon, we traded with the Indians. They were, of course, indifferent to prices. They would not sell us anything unless we gave them free drinks of rum. As soon as a man had sold one thing, he went off to his house to look for more things to sell. While he was in his house, he had a drink of guarapo. Before we had been in Palomino three or four hours, Hawkins, Pablo, Roberto, and I were the only sober men in it. I regret to say that there did not seem to be many sober women either. But we were not responsible for that, for we did not give the women any rum. It was the guarapo. Not that I have anything against women drinking; but you do not, as a rule, intentionally intoxicate the wives of your hosts when your hosts, if sober, would not want them intoxicated. Anyway, the women got intoxicated, and they began coming into the guest house and examining our guns and cameras and baggage, even trying to sell us a few little things. Then I realized that I was in the midst of something that I had read about in books of anthropology—an Indian village in the full swing of a ritualistic debauch. We could not have stopped the debauch had we wanted to. Frankly, we did not want to, because it contributed greatly to the success of our mission, the purchase of "ethnology"; and also because it was very exciting to watch.

It always will remain a matter of great importance to me that once I was in a village of Indians who had had practically no contact with white men; who lived as their

forefathers lived centuries before the white men came to America, and who were drunk, men and women and some children, for seven days and seven nights. Say what you will about liquor; when a man is drunk you can determine his character. These Kagaba Indians are good people. For seven days and nights they drank guarapo by the gourdful, as you would drink water. Not one of them complained of a headache, and we never saw one of them sick at his stomach. They would drink until they fell down in the mud. And, mark this, man and wife always fell down in the mud in each other's arms! There is something about this kind of drinking; it was the most joyous drinking I ever have seen.

They would sleep under the rain in the mud, spouses in each other's arms. A few hours later, they would get up and start drinking again. What do they do when they are not having these rare debauches? They rise with the sun and work all day on their farms. When the sun goes down, they go to sleep. That is their life.

By nightfall we had bought about eighty mochilas, several hammocks of sisal fiber, forty or fifty poporos, twenty-five tamils, and a drum. The drum was borrowed by our second cook, Roberto, who was something of an artist and something of a devil. He started drumming, and the Indians started dancing and produced other drums. That drumming lasted all the time we were in the village. I shall not forget it to my dying day. The rhythm was like this: ONE-two-three-four-FIVE-six, ONE-two-three-four-FIVE-six. PUM-pum-pum-pum-PUM-pum. When the Indians tired of this rhythm, they would change to the rhythm: one-TWO-three-four-five-six. This kept up for seven days and seven nights, but it never annoyed me. It was not sinister like the drums in Eugene O'Neill's *Emperor Jones*.

Maybe it would have seemed sinister to some people, but I liked it.

The Indians never made a threatening move toward us, none of them except that one hard-faced man, Mata. When he was not fighting with the comisario, he was hanging around trying to start a fight with me. He once had had some association with a Frenchman, and he thought he knew French. He also thought that I, being white, was French. He would hail me as "*Frances* (Frenchman)." Tiring of this, I called him "Goajiro."

"But I'm not a Goajiro," he answered belligerently.

"Neither am I a Frenchman."

(Remember, the Kagabas fear the poisoned arrows of the Goajiros as much as the latter fear Kagaba poison and magic.)

Mata would keep coming up to me, saying: "*J'ai monnaie* (I have money)." Then he would say: "*A baba aba*," which seemed to be his idea of some other French phrase. He was kept fairly busy fighting the comisario. I would move around rather noiselessly in my tennis shoes through the dark, and come up behind an Indian dancing to the drums. Suddenly, a figure would swoop around a corner and dive at the lone dancer. Sometimes it was the comisario attacking Mata. Sometimes it was Mata attacking the comisario. Their method of fighting was to slap the face, and pull the hair, and wrestle. They had knives and machetes, and even muzzle-loading shotguns; but, like other Kagabas, they never used these in fighting each other. Nor did they use the foot or the clenched fist. When one man was down on his back, the bout was over; but that did not prevent a renewal of the feud five minutes later.

Comisario Tuviate won the first three bouts by throwing Mata down firmly, slapping his face and rubbing it in the

dirt. Mata was not discouraged, and he won the fourth fight. He hit the comisario in a flying tackle and had him down before Tuviaata knew what was happening. The other Indians never interfered. They regarded it all as rather amusing, and part of the fiesta. Here was a real issue worth fighting about. Remember, the comisario had taken one of José Mata's wives, and was about to get the other one. There was no doubt of the state of the lady's affections. With Anna, the older wife, this girl danced frequently outside our house, smiling coyly at Tuviaata and pounding the drum suspended from her shoulders, while Anna shrieked at us: "*Pedaza buena, no* (I'm a good piece)?" There seemed to be no jealousy between the women.

Imagine people among whom a duel between two rivals in love is confined to hair-pulling, face-slapping, and wrestling! There was something about these Kagabas which baffled me. They charged us thirty-five cents for the rooster, which is a fairly high price in that country, but then they showered us with gifts, coming into our hut with little bunches of potatoes, yucca, and radishes. Most of them do not see money from one year to another. We had some trade goods, and many of them preferred these things—needles, fish hooks, knives, and machetes—to any of our money. We used the machetes mainly as gifts to leading men or, in two or three cases, as a lump price to offset a big purchase. The women do not like the men to do the trading. That is the woman's prerogative. After the men were convinced we meant them well and would not harm their women, the wives came more and more frequently into our big guest house offering bags, cotton-winders, and wooden knitting needles.

Here are a few notes from my notebook, which give an idea of the sort of trading we did:

"Two mochilas for one knife (which cost ninety cents)."

"One mochila for one knife (which cost one dollar), one poporo (twenty cents cash)."

"One good hammock (for half a pound of salt and a fifteen-cent jackknife)."

"One dozen Woolworth glass beads (cost about five cents) for one *tamil* (small polished gourd for holding the tobacco paste the Kagabas eat)."

That was too much for a poporo. You can get a lot of them for ten cents apiece, even for a nickel. But this was the grandfather of all poporos. It had a huge "collar." Other things being equal, the most important man in a village is the man with the biggest collar on his poporo. This collar was made, as I have explained, by rubbing the wet, lime-covered poporo stick around the neck of the gourd. These men take the same sort of pride in building up this collar that our men take in building up a big "cake" in their pipes. It is no more silly than our pride or any other kind of pride. It is not nearly so silly as the "racial" pride of the mixed-breed Colombians, who are a third Indian, a third Negro, and a third Spanish, and who have only contempt for the pure Indians because they were conquered by the Spaniards. Of course, all but the Spanish ancestors of the Colombians were also conquered by the Spaniards or other white men, and much more badly beaten than the ancestors of those Indian tribes which still keep their identity.

Hawkins had forewarned me that the Kagabas think they are the oldest race in the world, so I replied tactfully when old Sylvestre Labata asked me what is the oldest race in the world.

"The Indians," I said, "and especially the Kagabas."

He beamed all over.

"What is the second oldest race?" he asked.

"The Negroes," I said, remembering Hawkins' coaching, "and the white race is the youngest race of all."

He shouted with joy. He called three or four of the elders around him, and repeated what I had said. I had confirmed his own theories!

In gratitude, he told us quite a lot about the past of the Kagabas. His tribe, in the days before white men, he said, had had a political and economic alliance with the Taironas. In return for the protection of those fierce fighters, the Kagabas had made the heavy stone work which is found all through this country, between the Goajira Peninsula and Santa Marta. Taironas had made the jewelry, the stone beads and the golden frogs. This confirmed Professor Marshall Saville's theory of the Taironas, and coincided with what Hawkins and I had learned by our digging. We were elated now.

Sylvestre felt expansive. He told us that he would explain everything to us about "the four tribes from which my people are descended" as soon as his head was clear.

"I can't tell you now. My brain is too dark from guarraapo."

Chapter Sixteen

THE KAGABA MASK

OUR SECOND DAY IN PALOMINO began with the purchase of supplies. The Indians liked us now. We could tell that because the prices of everything went down. We got chickens for about twenty-five cents apiece and two quarts of potatoes for five cents. Several of the Indians made us presents of *manzanillo*, the blossom of a little plant from which they brew a tea which is good for indigestion. Hawkins has tried it and says it is very effective.

Palomino was filling up all the time. The annual fiesta naturally would bring most of the inhabitants together. I suspect that word that we were being generous and would not hurt anybody rather increased the congestion. This was the first and last time we saw a Kagaba village with practically all its inhabitants present. They were the friendliest people in the world. Many a night a Kagaba would enter our lockless Guest House, looking for cigarettes or rum. I never thought of having a gun around or even of barricading the door, except for those times when we got tired of being annoyed by happy drunks. Yet in Colombian towns

I always keep a gun close at hand, and I do so when I am in a Goajiro village.

I was constantly trying to learn about Kagaba magic, of which I had heard much. (I must confess that I learned very little.) Hawkins had told me that the first time he visited these Indians he had a sore throat which had been cured by an herb that the Indians gave him. It was *gwanduli* leaf. Hawkins has used it since to cure hoof-and-mouth disease in animals.

Another herb is used to tell fortunes. It is a leaf called *frailijon*. The mama burns it to study the smoke patterns. Each leaf is supposed to represent a person. If the smoke of two leaves crosses, it means a fight. If the two smokes rise in parallel columns, it means a friendship.

Chamiko is a bell-shaped white flower two and a half feet high whose leaf is shaped like the palm of the human hand. The leaf is poisonous, especially when powdered and drunk in water. It is a tasteless, slow poison. The abdomen of the victim swells and the body wastes away. A white doctor who saw one sufferer from *chamiko* thought he had dropsy and tapped him, but found no water.

A great many *civilizados* have tried to buy the Kagaba poison, but they cannot get it. The particular mama they ask tells them to come back next moon. Then he goes to Macostama and asks the chief mama what to do about it. The latter invariably says "No!" The *civilizados* get no Kagaba poison unless they get it into their bellies or onto their hides unwittingly.

The second day in Palomino I tried to locate a mask. I could see no trace of any. Nobody tried to keep me from going into the two *cansamarias*. One of them was deserted, and the other was the home of all the bachelors in the town. The latter temple had a drum and several rattles

which I coveted, two of them being better made and having a smoother finish than any rattle I had seen. But I saw no trace of a mask. I remembered what I had said to myself about the mama of Kasikiale: "Maybe he'll sin against his gods for his wife's sake. Men often do that." The mama's wife had a liking for beads. I began to think that maybe he would sell me the mask for a lot of those beads which Hawkins and I had dug out of the Tairona graves on the coast. They have religious significance to the modern Kagabas. But the mama never sinned against his gods to that extent; at least not while I was there.

I was always sneaking around cansamarias, vainly hoping to hear the noise which Hawkins had heard with Wollaston and had described to me. Part of it, Hawkins said, was made by an old hag with baggy skin. She squeaked like a wild cat from under a pile of grass, where she lay naked except for a loin cloth. This tale interested me very much because I had never heard of another instance of a woman's being admitted to a cansamaria. What was this woman doing in there with the shaman-priest?

Often the mama changes his costume during the ceremony. He may wear a gold crown and then he may take it off and change to a tunic with wide bands of gold on the sleeves. Sometimes he wears a surplice of white cotton, like a woman's dress, a broad ribbon coming from the back and hanging over the front. Hawkins said that when he was with Alden Mason he had flashed his light into the door of the cansamaria in Palomino, and the comisario had berated him. A fire inside the cansamaria was a broad patch of coals. The mama was throwing dry leaves on it every now and then which made smoke and smell. All this including the patterns in the smoke and the patterns in

the smell had ritualistic significance. The coals were kept brightly lit all the time.

The natives count days by the sun. Ten days is ten suns. The overhead swing of an arm denotes the setting sun; a circle made with the arm means a moon. If a priest tells an outsider to come and meet him in three moons, the priest will be there on the exact day.

I was regretting that the flooded river kept Mama Miguel away, for I was very curious to see him. He is famous for his powers of divination. He was broken hearted over the loss of his gold crown and his golden bracelet. He used to say that when he had these gold things with him, the devil wept for fear in his presence.

Hawkins always was professing to have a great respect for Kagaba magic. He said that when he had been with Wollaston, he had seen the golden poporo of the chief mama of Macostama, who danced with it.

"The mama put on his wooden mask and his shirt of palm leaves reaching to the floor, in place of his crown and surplice," said Hawkins, "though usually a cotton dress was underneath, I think. Other priests blew horns made of gourd and one made of shell. Every horn had a different sound, but all were mournful sounds. The head mama kept time with his rattle, swaying his whole body. His dress would swish over the ground and he would make a long sway, with a long blow on the horn. Then he put away the rattle, and took out his golden poporo and golden poporo stick; but the lime he got out of the poporo, he blew out of his mouth, instead of holding it in his mouth and chewing on his coca leaves in the usual way."

It was one night in his hammock in Palomino that Hawkins told me a story. He had a way of breaking into reminiscences without any preliminaries. It often was diffi-

cult for me to know where one story began and another ended:

"There are lots of hail storms in these mountains," Hawkins went on. "One time Dr. Mason and I were out with the chief mama in a big hail storm. We were really worried, the stones were so big. The chief muttered and moaned and blew powder off the end of his poporo stick in four directions, while our men were building themselves a shelter of palm leaves and sticks and I was making a tent for Dr. Mason and myself out of his poncho. While we were building these shelters, the hail stopped. The chief mama took credit for that. When we got the shelters made, the storm began again with bigger hail stones than ever. After it was over, the mama said: 'If Dr. Mason is a doctor, let's see him stop a hail storm until the shelter is made, as I did.' He also challenged Dr. Mason to blow in his hands and make fire, the way he said he could."

Hawkins used to entertain the Indians with reminiscences of Alden Mason, whom they revered, and with reminiscences of Wollaston, English botanist, an aged man who had brought a young bride here and lived with her in a pneumatic tent, which had intrigued the Indians as well as Hawkins and his helpers. The Indians were in gales of laughter over Wollaston's pneumatic honeymoon.

I wonder if there is any basis for the theory suggested by Hawkins that an under-sexed people is more apt to go in for magic than an over-sexed people? Certainly the sex life of the Kagabas seems to be very light. It is not merely that man and wife live in separate houses and do their mating in open fields (on the theory that a child conceived in the dark would be born blind). Neither men nor women seem to have much interest in the other sex, except when they are drinking guarraipo. Hawkins' theory may be worth

considering. It may prove that we, in the United States, have comparatively little need of religious ritual because we make an involved and romantic ritual of love. (Look at our magazines, books, plays, movies!)

Preuss, the German ethnologist, has suggested that the Kagaba custom of man and wife living in separate huts may be one reason for the declining birthrate. The birthrate in Palomino is higher than in any of the other principal Kagaba villages, and the children look healthy, which generally is not the case elsewhere. On the whole, however, there can be little doubt that the Kagabas are dying out. Couples with only one child, or with none at all, are very numerous. The Kagabas themselves are concerned about this and talk about it freely.

"When my first wife didn't have any children, I thought it was her fault, and got another wife," said one Palomino Indian, "but the second wife has no children either. It must be my fault, or something in the blood."

"I don't know what we can do," the old mama of Kasikiale said to me. "All of us get married, but we just don't have children. Soon there will be no more Kagabas. The oldest race in the world will be no more." When that time comes, archaeologists will find it well worth while to dig in many of the temple sites we saw. But at present the Indians would kill anyone who disturbed the burial jars under the sites of ancient or modern cansamarias. (And they are not to be blamed. No one would welcome an archaeologist to his family plot.)

Even when the richer men have more than one wife, there are usually more wives than children in such families. A distinction is made between the legal wife and the "by-wives," although if there is only one by-wife (there is usually not more than one), she usually lives with the legal wife.

Both wives must be strictly faithful to their husband. A lover is given what these Indians consider a severe punishment. He is required to make a public apology to the husband! Most Kagaba husbands are quite satisfied with this, although some insist on a fine.

When a husband dies, his widow must, *before the end of that same day*, have sexual intercourse with a young lover selected by the mama—in order to keep away the ghost of the husband. Thereafter, the widow never may remarry, but it is considered *au fait* for her to have amorous dalliance with any man she pleases. There are no prostitutes, but Kagaba widows have been known to bestow their favors on Colombians in return for small gifts, despite the fact that it is the belief of most Kagaba women that such an act would cause their immediate demise. Up to the time of this writing there seem to have been no children of mixed blood in the tribe.

There are more females than males among the Kagabas, and far more widows than widowers, for men may remarry as often as they like.

Another peculiar custom is that a daughter-in-law must have at least one sexual relation with her father-in-law before taking her husband, in order to thank him in advance for the religious secrets he will teach her husband.

One afternoon I went hunting with Roberto. Coming out suddenly from a big clump of wild cane to the bank of a small brook, we nearly stumbled on a Kagaba man and woman in each other's arms. They saw us just as we saw them, but they paid no attention. It was my civilized training, I suppose, which caused me to leap the brook and plunge into the cane on the other side. Roberto callously lingered and observed the naked couple until I called him

a second time. This second call was a threat to "shoot his bloody head off" if he did not come.

When I told Hawkins of this, he said he had twice found Kagabas in similar circumstances, and had encountered the same indifference to observation. Strangely enough, however, they object to being seen bathing alone.

In Palomino I tried to buy an Indian's cotton trousers. He said:

"Your hammock is made of the same material as my trousers. You can cut that up for a pair of trousers. You don't need to buy mine."

They could not understand why we wanted to buy their things. The nearest we could come to explaining the museum was to call it a "*Casa Grande de los Indios* (Big House of the Indians)." It was a place, we said, which was collecting representative arts of all the Indians of all the Americas. Still they did not understand. They were astonished at my willingness to buy all articles. Why should I want old trousers? As a matter of fact, I should have made a more persistent effort to get those trousers, if I had not been blissfully aware that back in Santa Rosa an Indian was weaving a complete costume for me. He had been bribed by a present of twenty bored beads and six or seven unbored beads (doncellas, or damsels), which I had secured from Tairona graves.

The men do not always wear trousers under their knee-length tunics. The blouse and short skirt of the women are so arranged that their appearance is very similar to that of the men when the latter are without trousers.

We decided to put on another barbecue at Palomino, like the ones we had had at San Miguel and Santa Rosa. We picked out a young bull which we wanted to kill for the feast, but we had trouble because its owner would not ac-

cept the five dollars we offered him. He must have instead of money a blanket, one of the two Hawkins was using. Hawkins' two blankets had cost me only two dollars apiece in Santa Marta, but the difficulty was that Hawkins needed both to keep warm at night. We told the Indian frankly that the two blankets together were worth less than five dollars, but still he would not accept the five dollars. He had taken a fancy to the blanket, and that was that. Finally, Hawkins let him have it in exchange for the bull, and I gave Hawkins my poncho to keep him warm.

Families began arriving early on the day of the fiesta. Women and girls of six or seven came leading bulls and pigs, sometimes three or four pigs on a string. One such family disappeared into their house, opposite our guest house, and then one woman came back with a wooden bench. I offered her twenty cents for it, not noticing that the back was much worn. She pointed this out to me, and said that it was not worth more than ten cents. I gave her ten cents, and then went out of my way to buy two or three bags from her that I did not want, in order to reward her for her honesty. These Kagabas are incredibly honest. If Jesus Christ came back to earth, he would love them. Hawkins and I used to lie awake nights suggesting ways and means of protecting the Kagabas from the rapacity of the cheating Colombian traders.

Almost immediately after I had bought that inferior bench an old woman came out from another house with a much better bench, and I gave her twenty-five cents for it. Prices bore Kagabas. You are their friend or you are not their friend. If you are their friend, they will sell to you, although they don't want money. If you are not their friend, they will not sell at all.

They offer you a bag for a dollar that is worth fifty cents.

"No. Fifty cents," you say.

"Yes, fifty cents. That's better." The owner smiles.

A few minutes later he comes back with a very fine bag.

"Fifty cents," he says.

"No. That bag is worth a dollar." You give it to him.

"Yes, a dollar. That's better." He smiles the same smile!

These people are too good to be true. But they are true.

Something of a diplomatic crisis arose when Hawkins and I discovered that our two cooks, Pablo and Roberto, who were living in a hut next to ours, had brought with them a good deal of rum in small packages and were selling it to the Indians. We did not like this, but we decided to do nothing about it—first, because Pablo and Roberto were quite capable of deserting us and walking back over the mountains to Pueblo Viejo, and second, because the Indians were in the full swing of their seven-day debauch and were determined to have intoxicants. They made no attempt to conceal it. They said that their own supply of guarrapo was rather limited, and they needed to eke it out. They kept asking to buy the rum that Hawkins and I had in our twenty-gallon jug. I was very proud of Hawkins on these occasions.

"No," he would say, drawing himself up majestically, "we do not sell rum. Sometimes we give it to our friends. We hope, in return, that they will do us the favor of selling us their mochillas, tamils, poporos, and other things at a fair price. But whether they will trade with us or not, we do not sell rum. We merely give it to our friends."

The drums always were in the back of my mind, because I could not stop hearing them. They now beat a rhythm I had often heard in October festivals in Japan: one-TWO-three-four-five-six, one-TWO-three-four-five-six.

Flutes were being played, too, and calabash trumpets

were blown lustily. The former may sound gay, but the tone of the trumpets is always mournful to me. The drummers often ran or danced drunkenly, while the flautists stood still, one with a male flute and one with a female flute, and swayed toward each other like trees in the wind. Aside from the music and drinking, there seemed to be no ritual to this fiesta.

I had a couple of dollar watches with me, and offered one of them to an Indian instead of money in a trade for a male flute, but he would not take it. He could tell the time of day without a watch. If their chief god, the sun, is obscured, there are other signs by which these people can tell time. In Santa Rosa, for example, you can be sure it is 3:00 P.M. when you hear the parakeets flying back to their remote roosts.

These Indians do not have any interest in modern inventions. They will not adopt anything of the white man's except what they can use, and that means steel. They will take knives, axes, and machetes, and they will trade for them; but they have not the slightest interest in any other invention. The entire display of gadgets invented by Thomas A. Edison, Marconi, and Henry Ford could be set down before them without arousing their envy. I loved them for that even more than for their gentleness. They have sound reactions and good taste. They know that a mastery of mechanics does not spell civilization; that easy and comfortable living has no relation to the intricacy of the machine. They have no prejudice against machines, either. They probably would admire a good meat grinder more than a washing machine. They certainly would admire a good shotgun more than an automobile.

We had bought so many things already that we did not know whether or not we could carry them all away. By the



The author returns the Tairona mask to Mama José de lacruz Dinula, most important Kagaba religious leader. Note the Mama's expression.



Stone praying seats over graves of Kagaba shamans.

beginning of our fifth day, it was noticeable that the quality of the things offered to us was deteriorating. The villagers had sold us all their good things. It was noticeable, too, that we had eaten about all their available chickens and yucca. They brought in more onions, and sat around in amazement as I ate them raw. One of their mangy, short-haired dogs came into the Guest House and tried to grab a cracker I was eating. I rose and gave it a swift kick. Six Indians who were sitting around jumped up and ran out of the house with great alacrity. They were scared to death of anybody who would kick a thieving dog, although they detest thievery and almost never steal. By their custom, a hunting dog has a right to share the food of men and women. They let these dogs eat out of the common pot into which men, women, and children dip their hands for their food. The meal often is a kind of stew of vegetables and meat, which they allow to get cold before they eat it.

Old Sylvestre Labata came into the Guest House. He carried, on his shoulders, his five months' old grandson just named, in honor of me, Mason Labata. After the usual "*Pedazo quiero yo* (I want a piece of rum)" Sylvestre danced about the dirt floor, singing to the baby:

"Oh, darling, I understand you, and I know that you have come from God, but darling, you will live forty-eight years before you will know anything, and then you will know that you have missed a trick, and then you will either drink a very poisonous concoction or you will grow up, so, darling, I think that you might as well go back to sleep and forget all about it." Whereupon he handed the baby over to his aged wife and told her to take the child back to his tiny hammock.

Sylvestre said that his brain was still "too dark with guarapo" for him to tell us about the four ancient tribes from

which the Kagabas descended. Seyrego and Serebi were two of them, but he never could remember the names of the other two.

A little later, a young Indian of perhaps twenty-two brought in his young bride, who was about sixteen. He silhouetted her against my big, red-cased electric flashlight, with three batteries, which stood on the floor.

"This is my wife, Catalina Nervita," he boasted. "Isn't she lovely! Look at her! Hasn't she got a lovely ass?"

Pablo and Roberto guffawed. Hawkins chuckled. I moved around in my hammock. Catalina hid her face behind her hand.

"Don't you think I am lucky?" He flung his hand down the young lady's back. "Don't you see what a beautiful ass she has? Am I not to be envied? Don't you think that God is very good?"

"Yes, God is very good. 'Awkey give me a traigo." Antonio Sarabata, that very intelligent-looking Indian of about twenty-six had, by now, sold us everything from his own house and everything he could borrow from his friends. His fondness for Hawkins and me seemed to be growing. He hung about us, pawing us and falling over us in the manner of drunks, shouting "*Hatay* (My father)," or "*Sulswa* (My son)." It didn't matter to him whether he said he was our son or our father. He wanted to get over to us the idea that he was very fond of us both. It was rather nice. He was drunk, but he held liquor like a gentleman—and a Kagaba.

An old man asked me for another traigo. I said: "No, another drink will make you fall down."

He replied: "But I want to fall down."

It was hard to refuse such zeal, to attain complete release from the cares of life, but I refused.



The Kagaba-Arhuaco village of Palomino.



Flashlight picture of intoxicated Kagabas at height of Palomino festival. Sylvestre Labata in foreground is leaning against fiber box which held sacred mask.

Anna, the older wife of José Mata, whom he had lost to the comisario and who was now trying to have a flirtation with Hawkins, was dancing drunkenly with a drum, in front of the Guest House. Her husband, still trying to fight with me and saying, "*J'ai monnaie*," and "*a baba aba*," staggered around her, then fell to the ground. Anna picked him up in her arms and deposited him on a knee-high dobe shelf which ran around the Catholic Church. After she had laid him out on the shelf, she straightened his clothes, and put her blanket over him, then turned to me.

"*Ese mio* (That's mine)," she said, with a look of pride. Kagabas are like other women.

The morning of our fifth day in Palomino had been clear and hot, but by noon it began to rain. After we had eaten a large meal of onions, rice, beans, radishes, and coffee, Hawkins and I fell into that delicious sleep you can get in a hammock under a thatched roof when the rain is falling on a hot afternoon. We awoke in a mood of depression. Hawkins said:

"Well, Mr. Mason, I guess we've got to give up all idea of getting the mask."

I was too discouraged, on that subject, to answer. I wished that I was back in Connecticut, swimming in Long Island Sound.

At that moment the heavy, guayacán door swung open and Tuvíata, the political chief of the village, came into the room, shutting the door quickly and carefully.

"How much will you give me for this?" he asked, taking something out from under his cotton tunic.

It was a wooden mask, somewhat eaten by termites, and looking older than the mask of San Miguel.

"Hide it quickly," he said, breathing very fast.

I wrapped it up in the folds of my hammock. I was so excited I hardly knew what I was doing.

"Hide it better," he said.

I wrapped the mask in a cotton bag of the Kagabas, put that in the one fiber box which had a padlock, and turned the key. I gave Tuviana five dollars in silver—all the change I had in my pocket.

"*De me traigo*," said Tuviana. I gave him a drink of rum. He was shaking all over.

"It's a mask," I said to Hawkins.

"A match?" he asked. He was still half asleep.

"No, a mask," I said.

Hawkins choked in his excitement.

Tuviana put away another half-tumbler of white rum and regained some of his usual cockiness. I strongly suspected that he had stolen the mask, but if I refused to accept it now he might be found out. That would mean trouble all around for Tuviana and for Hawkins and me. Before I had a chance to question him Antonio Sarabata, the young Indian I shall always think of as "Napaybo" came into the room. I was afraid that he had seen the whole transaction through a crack at the side of the door. His eyes seemed to say: "I have seen everything. I will reserve decision but I will probably be your friend in this matter." He had brought with him a couple of third class, very old fiber bags. I gave him a pair of scissors for them—a high price, for it was the equivalent of one good, new cotton bag. I could do this gracefully without implying that I suspected he had been watching through the wall, because he had been very obliging. There was just a chance that Sarabata was in league with Tuviana. So far as we could tell, he kept comparatively out of politics, but no Kagaba Indian can keep entirely out of it in one of these small villages.

During the next two days Hawkins and I felt like two animal trainers in a big cage with twenty lions and twenty tigers, and the action going crescendo. This was a Thursday. We had told the Indians we were going to leave Saturday. After talking it over Hawkins and I decided there was no use trying to hurry things and go away Friday. That might make them suspicious. At all hours of the day and night, Indians were bursting into our hut, asking for a traigo or "a piece of rum." We gave them as few drinks as possible. They were having plenty of their own guarraapo outside.

The drums beat wilder and wilder. José Mata kept crashing into the hut, bleary-eyed, to seize my hand or forearm in an iron grip meant to be hostile.

"J'ai monnaie. A baba aba, a baba aba."

He was disappointed that I would not fight him. He was angry that because of his refusal to trade with me I gave him fewer presents than I gave the others. I would not pay him the five cents he demanded for the drumming, which obviously was a tribal matter, and not his perquisite. He was, perhaps, one mercenary Kagaba.

Friday afternoon Sylvestre Labata promised that he would have baggage bulls to take us away Saturday morning. After getting his promise, I went down to the river and took a swim. I noticed, with satisfaction, that the river was still rising. That would keep Mama Miguel from coming back and discovering that his mask had been stolen. We hoped that he was the only member of the village, except the comisario, who had known its hiding place.

An unusually large number of Indians crowded into the Guest House that evening, perhaps because the news got around that we were leaving the next day. The same bridegroom, with the same pride beaming on his face, brought

in his bride and put her against the light so that we could see her silhouette. More and more Indians came into the hut. They were all feeling very high. Fat old Sylvestre Labata insisted on sitting down. He helped himself to one of my kayaks, turned it over on its side and sat on it. I held my breath. He weighed two hundred, and that was the padlocked kayak which held the mask!

Sylvestre's little, oldest wife of three seemed to be feeling very kittenish. She began to sing a funny little song, extending her arms toward me.

"What is she singing?" Hawkins asked Sylvestre.

"She is singing to the tall one with the beard, 'I would like to take you by the hand and lay you down in the grass.'"

Several times I had experimented with flashlight photographs, but without much success. I tried another one this evening, persuading all the drunken Indians to line up around Sylvestre Labata. I used three of the electric bulb flashes this time, in the belief that my previous trouble had been inadequate light. The picture came out all right, but the amusing thing about it was that, although the Indians never had seen or heard of a flashlight photograph, they were all so drunk that they could not remember the incident the next morning.

Napaybo kept coming in and pawing me, gazing seriously into my eyes while he exclaimed:

"*Hatay* (My father). *Tuay* (My older brother). *Nani* (My younger brother). *Yo soy su hijo, yo solo* (I am your only son)." He would speak first in Kagaba, then in Spanish.

The drums got louder and louder.

We didn't sleep much that night. Was I doing the right thing to keep the mask? Here was a nice ethical problem. The museums wanted a mask more than anything else the

Kagabas possessed. I was pretty sure this mask had been stolen, but it had not been stolen by me. I had bought it, in good faith, from the political leader of the village. If it were found, I would say:

"Well, I came here to buy anything you would sell me. The comisario offered to sell me this mask, so I bought it."

That would, perhaps, save Hawkins and me, although it would pretty surely cost the comisario his life. Yet, it seemed to Hawkins and me that the time to give back the mask had passed. The time to give it back was the instant it had been offered to me, in the gloom of the Guest House. I determined that if, by the grace of God and the guts of Hawkins, I could get the mask to the United States, I would have a clever copy made, termite holes and all, and bring the copy back to Palomino. I might even bring the original back if the museum were satisfied with the copy. Then these Indians would think that a miracle had happened. "God left us; God has come back. He went away with this tall white man with the beard and he has returned with him. Therefore, God likes the white man. Maybe the bearded man is a god himself," they would say.

There were other matters which interfered with our sleep. The Indians kept pushing back the door of the hut, and asking us for a traigo. And I found a scorpion in my hammock. No scorpion has bitten me yet, and they say you're not initiated to the tropics until one has. The truth is that some people have a psychic unity with scorpions. A tarantula would not bite me, either—nor a snake. But a crab would. These things are predestined. You have to be psychic. Above all, you have to be mystic.

Just before dawn I woke up suddenly, in a fright. Tuviata was standing beside my hammock. He whipped something

from under his robe and offered it to me. "How much for this?" he asked.

It was a carved wooden baton, about two feet long. Tuvia explained, in a low voice, that it was called a *haduka*, and was held by the *mama* in certain ceremonies. I was excited again. Except for being somewhat longer, it was a fair imitation in wood of stone scepters found in Tairona graves. The German ethnologist, Dr. K. T. Preuss, has contended that *hadukas* and masks first came to the Kagabas from the Taironas.

Tuvia accepted two dollars for the *haduka*.

When we rolled out of our hammocks an hour later, impatient to be on our way, we found no Indians stirring. A dozen Kagabas were lying flat in the mud before our house, dead drunk. Husbands and wives lay in each other's arms—reeking with *guarrapo* and matrimonial bliss.

This was the morning that Sylvestre Labata had promised us bulls and mules to get out of Palomino. I went to his hut, and he was in his hammock snoring. I went around about an hour later, and he was still snoring. I went around in another hour, and he was sitting up, listlessly fishing some potatoes and yams and yucca and stewed cow out of a big iron pot which he had got by trading with white men.

"Where are our bulls?" I asked him, rather crossly.

"*Mañana*," he grumbled. Nothing more.

Thirty minutes later the village was entirely deserted, except for ourselves.

"Now you've done it!" Hawkins glared at me. "Didn't I warn you never to try to hurry the Indians?"

I was nervous. Trying to keep my mind off my urgent desire to get out of Palomino, I went down to the river and measured and photographed a tall stone on the bank, crudely carved to represent a man. It was six feet three

inches high and was not at Palomino when Alden Mason visited the village a few years before this. When I came back, Hawkins said:

"We're really in danger now, Mr. Mason." He was scared. "We've got to get out of here, and it's a pretty close thing whether we can or not."

I did not see much to worry about in the spectacle of a deserted Indian village. At the worst, it seemed to me, we could always walk to Pueblo Viejo over the mountain, Cuba, leaving our ethnological collection behind. Certainly, the four of us could shoot our way out through such gentle Indians. But Hawkins was worrying about the mask, and, although braver than I, he believed in Kagaba poison.

"Why don't you do something about it instead of blaming it all on me?" I asked peevishly, to hide my own fear, which increased at the sight of Hawkins' fright. "Up until now haven't I done everything you've suggested in handling the Indians? So far as ethnology goes, haven't you been the leader of this expedition?"

He went off and came back with Tuviata. I lay down in my hammock and listened to them talking outside the west door of our hut.

"You see," Hawkins was saying, "every nation has to have someone at the head of it."

"Si," said Tuviata.

"Well, you are the head."

But no effort of the comisario could get us the extra bulls we needed to carry our big collection. So we overloaded the baggage bulls we had brought into Palomino, and Hawkins and I gave up riding our mules and used them as baggage animals. We started out of Palomino at about eleven o'clock in the morning. As we went down to the river whom should we see on the right hand side of the trail behind a

big rock but the old wife of Sylvestre Labata and, on the left hand side behind a bigger rock, Sylvestre Labata himself!

"Adios!" was all they said.

That meant something. At least, they had come out of their hiding places, and waited to see us off.

"Perhaps they won't miss the mask for a long time after we leave," Hawkins said. "And then they will be apt to blame it all on Pablo, whose brother stole Mama Miguel's gold crown."

We crossed the river much more easily than we had come over it the first time, although it was a few inches higher. We knew the way now. We did not want darkness to overtake us before we reached the wayside shack near the top of Cuba, so we spent the night in the little hut by the river. Despite the danger of pursuit, the same mysterious contentment which I felt before in that little hut came over me again.

The next morning we started up the great mountain. The difficulties of the trail soon claimed all our attention. We forgot that we had the God of the Kagabas in one of our kayaks. The friendly fog wrapped us again, seeming to shut us off from all pursuit.

We got over the first crest of the mountain all right, and stopped at the wayside shack where we had paused for breath before. That night we slept peacefully, taking turns at sentry duty. At the first streak of daylight we went over the mountain.

Now it was downhill nearly the whole way to Santa Rosa, then steeply uphill a mile, and down again—two miles into Pueblo Viejo. We had to sleep in Santa Rosa, to our disgust, because our clumsiest bull, Sapo, balked in the middle of the river and was swept downstream two hundred yards,

banged from rock to rock by the current. It was a miracle that he wasn't killed, and a greater one that we recovered all our baggage from his back. The men had put our least valuable stuff on Sapo—our kitchen pots and one bagful of the cheapest mochilas. But the accident cost us a precious hour.

At Santa Rosa we got the Kagaba costume an Indian had been weaving for us.

I don't remember much about returning to Pueblo Viejo the next day. We arrived there in the forenoon. By 7:30 P.M., we had overhauled all our baggage for departure to the coast the next day, and finished relabeling some of the things which had lost their labels in the river when they fell off Sapo's back.

Just as we were slipping into our hammocks for the night, Tuviaata came in! He was alone, but for one quiet young Indian. Hawkins nudged me.

"Get ready for trouble," he said.

Tuviaata stayed a long time. Hawkins and I were sleepy, worried, and very annoyed, but we dared not remonstrate. Tuviaata would not take a drink. That, alone, would have made him an object of suspicion to us. He kept saying:

"I am not going to drink, but I am going to stay here all night."

He enjoyed our uneasiness, the devil!

He said he was not going back to Palomino, but the Indian with him was going back. I had an idea. I had meant to give a present to my godson, Mason Labata, the grandson of old Sylvestre. In our worry about leaving with the mask, I had forgotten it. I took off a blue malachite ring, as big as a signboard, which I had once bought in Greenwich Village as a sign of esteem for myself for having resisted the wiles of a too obvious girl. I asked the quiet young

Indian to take the ring to Mason Labata. I explained that it was charmed, that it would bring the baby good luck, but that if anyone stole it the gods would lead the thief to quick and horrible death. The quiet young Indian left.

"Now, how are we going to get rid of Tuviata?" I asked Hawkins.

"I don't know, but give him a pair of scissors and see. Maybe he wants a bigger price for the mask," he answered.

I gave Tuviata a pair of scissors, and a comb to boot. He went somewhere else and spent the night—or what was left of it—for this bright thought about the scissors did not come until three o'clock in the morning. At about half-past four, when Hawkins and I were getting up, Tuviata appeared again!

We had one trade machete left. It had one of those fancy scabbards that the Indians love, a leather scabbard with fringes on it, which Hawkins had had made in Santa Marta for ninety cents. The machete itself had been made in Collinsville, Connecticut, and had cost three dollars gold.

I expected an army of Kagabas to follow Tuviata any moment. They would be without guns, I imagined, but laden with poison, and trick ways of using it.

"Give him the machete in the scabbard with the leather fringes," I told Hawkins.

When it was laid in his hands, Tuviata beamed from ear to ear.

"I am never going back to Palomino," he declared. "The women are faithless there. My own pueblo is San Francisco. They appreciate me there and the women are more beautiful and faithful. I will be a big man there with this machete. *Nininiguku, napaybo* (Good-bye, friend)."

"*Nininiguku, napaybo!*" said Hawkins and I.

Tuviata added a sentence about his faithless wives in

Palomino—"faithless," although he had stolen them from José Mata. The sentence does not need to be translated literally. One out of two husbands who read this can say it just as forcefully. Tuviata went down the trail toward San Francisco, fondling the machete, but stopping, now and then, to take the comb and scissors from his larger mochila and fondle them.

Judas Iscariot sold his god for thirty pieces of silver. Tuviata had sold his for five dollars, a machete worth three dollars, a scabbard worth ninety cents, a pair of scissors worth twenty-two cents, and a comb worth ten cents—a total price of nine dollars and twenty-two cents, United States currency.

Chapter Seventeen

TAIRONA GOLD

I HAD BEEN TO THE LAND OF EL Dorado and I had come back with a great deal of treasure. I had found gold and precious stones. These were the least of my findings, save in what they told us. The greatest treasure to be sought in the Tairona country is knowledge, and I was able to bring back some information that is new to men of our time. At least, the world knows a little more about that unconquered nation of metallurgists than it did before I went into their rich country with its formidable coast.

Two important findings resulted from my work in the Tairona country. The first of these was information establishing a definite Tairona-Kagaba connection, some of which has been narrated in preceding chapters, and which I will go into more fully in Chapter Eighteen. The second, which I propose to discuss here, is based on archaeological discoveries, some of which resulted in suggesting a cultural connection between the Taironas of South America and the Mayas of Central America. Other finds established the existence, in the Tairona area, of three ceramic types resembling the Chiriqui culture of Panama.

I have related already, in Chapter Eight, how pottery represents the entire life of the aborigines. The possible contact between the Tairona and the Maya nations is indicated, first of all, through burial urns.

Dr. Alden Mason had found three types of burial urns at Gairaca and other Tairona sites. All were of thick, red pottery. Type A was massive—about twenty-nine and five-eighths inches both in height and in width—and like two joined truncated cones in shape.

“The urns of Type B are the most graceful and artistic, being bottle-shaped with quasi-globular or ovoid bodies and necks of relatively short length.” They averaged thirty-one and a half inches in height and about twenty-three and five-eighths inches in width.

“Type C is a flattened, globular bowl-pot, with a width nearly double the height, averaging fifty by eighty centimeters (nineteen and eleven-sixteenths by thirty-one and one-half inches).”

I found a number of all three types of urns.

Both Dr. Mason and I found that Type B more than the other types seemed to have been used for the interment of rich or upper class Indians. More frequently than the other types of urns they contained golden or other ornaments indicating the wealth of the deceased. One of the B urns which I found at Gairaca contained three nice axheads and twelve carnelian beads, cylindrical and bored. Beside it was a small globular pot with a big hole in its side. It contained a few polished black sherds and two sherds of a thin reddish ware superior to its own coarse reddish brown material. It also held a few turkey bones, which was surprising inasmuch as the larger urn certainly had once contained human bones which had disintegrated completely with time. The Taironas made a practice of placing small vessels containing

food for the dead beside their burial jars. Usually, this was done at the time of interment.

In addition to the three types of urns first described by Dr. J. Alden Mason, I had the good fortune to discover a new type of burial jar (Type D) and a subtype of it (Type D-1) in the Tairona area.

Type D, which I found first at Gairaca Bay, is a straight-sided burial urn thirteen and three-eighths inches high and fourteen and three-sixteenths inches wide at the mouth. Below the mouth the lips project out at each side. Like the others, it has an annular base. It differs from Type A in having straight sides instead of the truncated effect. It differs from Type B in that its greatest width is at the lips instead of at the shoulders. Later, south of Santa Marta, I found the variation of Type D, which I named Type D-1. It is the same as D except that the lower part of the body is connected with the annular base by a short collar, much narrower than the diameter of the main vessel. The native laborers whom I employed called these vases "goblets." That is not a bad description of their form.

A year after my first expedition to Colombia I found three specimens of Type D in the East Bank of the Ulua River, Honduras, five miles south of Progreso, with nothing in them but mud. (See Chapter Eight.) This is the Maya, not the Tairona country. How did Tairona type urns come to be there? Were they carried there in trade? Were they a Maya imitation of Tairona models? Had the Tairona imitated the Maya? Or had there been independent invention?

The second possible evidence of a Maya-Tairona connection is a scalloped, crescentic shell nose or earring which Dr. J. Alden Mason calls "one of the most beautiful and characteristic of Tairona shell ornaments." Only four of these have been found in the Tairona region. One is in the

American Museum and one in the Carnegie Museum. My expedition acquired two: one each for the Museum of the University of Pennsylvania at Philadelphia and the Museum of the American Indian, Heye Foundation, New York. Prior to going to the Tairona country I had found two almost identical shell rings in a burial mound at San Felipe, British Honduras, as related in Chapter Seven. They were in association with human bones and a few articles of grave furniture within a remarkable "coffin" of limestone slabs.

Did the Mayas make these rings and trade them with the Taironas? Or did the Taironas make them and trade them with the Mayas? Or did each nation independently create the same form? The fact that there were two, not one, of the rings in the British Honduras burial strongly suggests that they were earrings instead of nose rings.

A third possible indication of contact between the Maya and Tairona cultures was an incensario of the "slipper" type found in a cave in the city which I think was Tairo. This pottery incense burner is shaped like a common human foot covering of medieval Europe. It is the first vessel of its type ever found in collections from the Tairona region. However, I found similarly shaped pottery vessels on the upper Ulua River, Honduras, during the expedition which acquired the three burial urns of the Tairona D type in the lower Ulua Valley. As already noted, this is a region much influenced by the Mayas. The dimensions of the Colombian piece are: length, eight and eleven-sixteenths inches; breadth, five and seven-eighths inches; height, three and five-sixteenths inches; width across lips, four and three-sixteenths inches.

A suggested connection between the Taironas and the Southern Mayas would not have much force if based only

on these three findings: a vessel of Honduran "slipper" type in Colombia, three vessels in Honduras resembling Type D Tairona urns, and scalloped shell ear ornaments from both Tairona and British Honduras burials. It has possible force in view of the strong indication that Tairona contacts reached at least as far toward Honduras as the Chiriqui region of Northern Panama. This region is, roughly, half way between Pozos Colorados and the mouth of the Ulua River.

The possibility of a Chiriqui-Tairona connection was suggested by the character of pottery found in Colombia. An earlier indication of a resemblance between Tairona and Chiriqui pottery was noted by Dr. Mason in his study of the relief sculpture on burial urns in his own collection. He found more relief sculpture on Type A urns than on the others. I found more on Type B.

The relief sculptures found on burial jars usually are of human faces and busts. They often show such ornaments as earplugs, nose rings, and gorgets. Very often, two arms and hands are clasped or crossed on the breast. Dr. Mason encountered many facial features "apparently generally representing a bald eagle of Chiriqui type." I found only a few of these, but Dr. Mason's suggestion has gained significance with my discovery of Chiriqui type whistles, animal figurines, and pot legs.

The frequency of what might be called effigy pottery—in some cases, even portrait ceramics—was a conspicuous feature of the Southern Tairona pottery. Its outstanding importance, to me, seems to lie in its resemblance to three types of Chiriqui pottery. The Tairona pieces are unpainted, whereas the Chiriquian analogues are painted. It was at Gaira and Pozos Colorados that we found whistles, animal figurines which are neither whistles nor vessels, pot legs

(both to tripod and quadruped vessels) in the form of the bodies of fish, crocodiles, or other aquatic creatures. Some pot legs were found with animal toes, and others represented the human leg (with occasional costume, such as studs on the ankle). The type of pot leg we found most frequently was in the form of a fish, a crocodile, or some other marine creature. These were often inverted so that the weight of the pot rested on the piscine or reptilian mouth. Almost identical pot legs have been found in the Chiriqui region of Northern Panama and Southern Costa Rica, but they had not been reported from the Tairona area previous to my work at Gaira and Pozos Colorados.

The frequency of these ceramic types resembling Chiriqui pottery strongly suggests that there had been trade or other contacts between Tairona and Chiriqui. But there was, and is, much more to be learned from Tairona pottery than this. There are salt deposits at Pozos Colorados. It may be that the presence of this mineral, highly valued by the aborigines, brought trading canoes here from considerable distances.

At Cinto Arriba we found the first of fourteen examples of a strange figure, with a visor-like structure on the forehead, affixed to a pot fragment. Most of those found later were attached to larger pots, and three were the handles of incense spoons. At first, I called these creatures "visor-gods," having in mind the tortoise-shell visors of Kagaba shamans. This name is not entirely accurate, however, because, at its middle, the pottery "visor" usually is cut back to the head, leaving the center forehead and the nose unshaded. The creature's face is distinctly pig-like, with a very broad nose and protruding eyes. The mouth and chin, under the nose, are just a flat snout. In several cases, the creature seems to be lying on his belly with his arms

akimbo, either upward or downward. In seven cases, he is holding a club or other weapon against the top of his head—or striking at his head with it. The Colombian laborers flatly called the thing a pig. I believe it is either a deity in zoomorphic form, or a representation of some hero or creature of folklore (possibly a trickster) who had a pig-like face. It might be an eponymous animal, like the bear of Haida totemism. The protruding structure over the temples may have represented highly conventionalized ears, or some form of helmet. No example of it was found within a burial urn. I found this pig-like creature in relief sculpture at Pozos Colorados and at "Tairo," as well as at Cinto. It seems, therefore, to be characteristic of the whole Tairona area. That leads me to hazard the theory that the Taironas had totemism.

I have found that the Kagabas have no clans today. It is known that the Goajiros have a very well marked clan organization founded upon totemism. Dr. Bolinder is correct in his statement that the Goajiro clans are matrilineal, and Simons is right in saying that each has a mystical connection with an eponymous animal, such as the jaguar, the vulture, or the peccary.

Totemism is much rarer in South America than in North America. Except for the Goajiros, an Arawakan people exhibiting much Carib culture, it is recorded in South America only for the Arawaks in Guiana and for the Araucanians in Chile.

I am aware of the possibility that totemism among the Goajiros may have been a trait inherited from the Arawaks of Guiana rather than from the Caribs. I think that, whether totemism was a Carib culture trait or not, the Taironas had it. The stone, metal, shell, bone, and pottery work of the Tairona gives us representations of a number of creatures.

Judging from my collection, as well as from the collections of Mason, Smith, and Nicholas, the creatures represented in this art work occur with the following frequency: (1) eagle, (2) fish, (3) parrot, (4) fox or wild dog, (5) *coati mundi* (raccoon), (6) frog or toad (I believe it is a frog), (7) "visor-god" or pig (occurring only in my collection), (8) pelican, (9) snake, (10) crocodile, (11) monkey, (12) turtle, (13) owl.

I am convinced that these representations are not the haphazard result of the free play of Indian whim. Indians never give free play to their imaginations. Every stroke in an Indian drawing, every geometric line incised on Indian pottery, means something. The meaning, for the South American Indians, is more often concerned with magic than with anything else.

Totemism is founded deeply in magic, whether or not one accepts the theory of Karsten that it is founded in animism. That is why I suggest that (1) the animal figures found in Tairona art are the eponymous symbols of matrilineal exogamic clans, such as are found among the Goajiros today, and that (2) the curious pig-like creature, the "visor-god," is nothing more than what the Colombian laborers called him—a pig, a wild pig, a peccary, and a totem of a clan, as is the Goajiro peccary today.

That brings up for consideration the interesting suggestion that the Taironas, perhaps a Carib tribe similar to, or identical with, the one which had conquered the Goajiros, were, at the time of the Conquest, exhibiting some inherited culture traits of the Caribs: cannibalism, use of poisoned arrows, and water worship. They were also exhibiting some traits, possibly Arawakan, such as totemism with exogamic clans. Finally, they were exhibiting some traits which, one may surmise, they had learned from their

economic and political allies, the Kagabas, as being well adapted to their environment: megalithic masonry, and use of coca. Water worship is, perhaps, a trait which they gave to the Kagabas in return, along with relief pottery, urn burial, polished rather than flaked axes, and stone seats like the Antillean *duho*.

In the medium of stone the Tairona artisans were almost as skillful as they were in metal. They did not indulge in the elaboration which they practiced in the softer material. Indeed, it is the very simplicity and dignity of the artistic treatment in the common Tairona axhead, or of the rarer monolithic ax, which gives these objects their aesthetic appeal.

Whether the Taironas or an earlier people carved the petroglyphs which are fairly common in the higher parts of the Tairona country is not known. They are found usually near waterfalls, or at least near running water. I have mentioned already the tall stone, rudely carved in the figure of a man, which I found standing upright on the bank of the Palomino River, about a hundred yards northwest of the village of Palomino. This stone was not seen either by Preuss or by Alden Mason, who could not have missed it if it had been there at the time of their visits, for it stands in the open above a slight beach where the Kagabas go constantly to bathe. Therefore, it must have been put in the location where I saw it since the visit of Dr. Mason in 1923. The monolith obviously is old, so one is bound to speculate concerning its importance to the modern Indians. Except for an evasive mumble to the effect that it was *Dios Antiguo* (Old God) by the rascally comisario of Palomino, I obtained no comment from the Indians about it. The shaft is roughly rectangular, with

no indication of human anatomy except for the crude head and face. It is six feet three inches high.

Large stone structure in the round is very rare. A shaft with a human head on it was found by Alden Mason near Las Congolos. Two incised stone slabs, forty-five and forty-eight inches long, were found at nearby Cerro de la Campana by Mr. W. M. Sutherland. These and a rude figure in granite, nine inches high, apparently of a bird, which Dr. Nicholas obtained at Taganga, are the only examples of large stone figures or of incised slabs (as distinguished from petroglyphs on big boulders) which I know about, with the exception of the figure on the bank of the Palomino.

Neither Goajiros nor Kagabas used chipped or flaked stone. The scarcity of flint in this entire region does not, necessarily, explain the absence of other forms of flaked stone. Chipping and flaking stone simply was not a part of the culture of the prehistoric Indians of the Sierra Nevada de Santa Marta and of the Goajira Peninsula.

The most puzzling artifact of stone found in the entire work of the University Museum-Heye Foundation expedition is from Pueblo Viejo. It appears to be the fragment of a polished stone cylinder, possibly a sort of bottle, two and seven-eighths inches in diameter. The fact that two holes had been bored in the bottom led James Hawkins to suggest that it had been some kind of a tool, such as might be used for receiving a piston. I believe it more likely that it was a mould used in metallurgy.

The most interesting of all stone objects encountered is a mirror, eighteen and one-half inches in diameter, and seven and seven-eighths inches deep from its polished surface to the extreme point of its convex posterior. Several times my Dibullan cook had mentioned a "wonderful stone" up

in the hills. It was smooth and blue, he said: "Azul, azul, azul!" I thought it was one of the local fairy tales, but, since the stone was near the site where I dug at La Cueva, I decided to look for it. The guide struck west off the trail, went uphill for half a mile, and found the stone lying in the leaves with its grayish-blue conical back upward. It was very heavy, but we pulled it over and polished the spherical undersurface. It was as remarkable as the cook had told me. There is no doubt that the stone had been used as a mirror, but not, of course, a portable one. The worked face is beautifully smooth and clearly reflected my face when I looked into it. I would call it gray, instead of blue, or perhaps gray with bluish shades in it. It was so heavy that I decided to leave it there and pick it up on my way out of the mountains, but on our return the baggage animals were so overburdened that we could not carry it.

When I went back five years later (1936), I was determined to get that mirror. Again, however, I could not carry it.

No other mirror has been reported from the Tairona area, not even a small mirror of pyrites of the type used by the Mayas and exemplified by one I found in a burial at San Felipe, British Honduras, as described in Chapter Seven. The one near La Cueva probably is still there. So far as I am aware nothing like it has been reported from aboriginal America, or, indeed, from anywhere in the world. It certainly belongs in a museum. I shall gladly give the information I have as to how to reach it to any reputable museum which cares to send for it.

The commonest and most beautiful of the stone implements of the Taironas are the axheads, celts, and chisels, just as the commonest and most beautiful of the stone ornaments are the beads. Axheads and smaller blades, which

I have just termed chisels because they resemble very much in form the metal chisels of our own carpenters, are so common in all the Tairona sites that they may be considered the outstanding Tairona products in stone.

One of the most interesting points to note is that many of the axheads, especially those found in burial urns, showed no sign of having been used. They were usually grayish, and nearly always were of the larger varieties, particularly the long, narrow-topped, wide-bottomed type. Celts, which apparently had been used, were found in the free soil of house sites and loose among the stones of the beach at Gairaca. Only two per cent of the black celts had an appearance which suggests they may have been used as money (objects of wealth) as many of the unscratched gray ones had.

Monolithic axes are the finest things made in stone by the Taironas. Dr. J. Alden Mason's work has made it necessary to revise the map on the distribution of monolithic axes, published by Dr. Clark Wissler. Dr. Mason secured thirty-six monolithic axes from the Tairona region—more than were known from all America. In addition, eight others from the Tairona area were located by me, two of them brought to the United States.

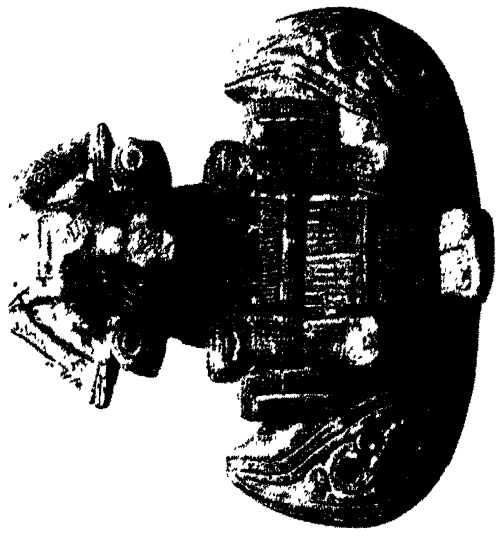
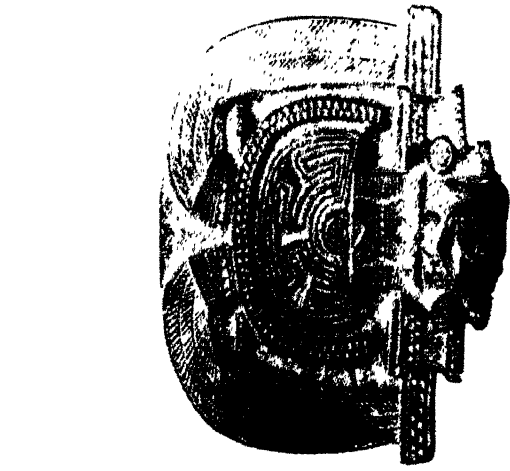
No two monolithic axes from this region are exactly alike. Some are a very realistic imitation in stone of a wooden handle into which the stone axhead has been inserted. Others are like a complete hatchet carved of one stone, but with a bit of the handle projecting forward of the blade. Still others are like this last type, except that the blade is a long, narrow celt, not unlike some of the very narrow-bladed tomahawks found in the Eastern Woodlands region of North America.

The edges usually are very sharp, but the stone, especially

in the case of the black slate ones, is too brittle to have been used for cutting anything much harder than pig fat. One would judge from the whole appearance of these axes that they were ornaments or ceremonial objects, made with great pains and preserved with care. The fact that they are found commonly in ollas (although not in burial urns), or in rather carefully arranged caches would also indicate this.

In the literature of the Conquest there is no mention of the use of a weapon like a monolithic ax by any of the Indians in the Santa Marta region. In Kagaba mythology, on the other hand, there are very definite references to monolithic axes, unmistakably indicating their ceremonial nature. Preuss was told how the Shaman Kasingui, after changing small stone stools into pumas which ate the Kagabas' "younger brothers," was defeated by a shaman named Namsiku. Namsiku, apparently, was a Kagaba. Then, the "Tayrona" Ulubaugni brought certain stones from Kasingui to Namsiku. Among them he brought the red stone ax which, when used with proper ceremonies, will bring drought, and the green stone ax which will bring rain. It seems that Kasingui was also a Tairona, although the account is a little vague on this point. There is no vagueness, however, as to the Kagaba point of view that the monolithic ax is an adjunct of Tairona ritual.

Pendants of stone are fairly common, some of them small figurines of animals, birds, and human beings. I bought a cylindrical, crystalline, reddish stone one and three-eighths by one by seven-eighths inches at Pueblo Viejo. It has "simple, straight sawn" lines on its surface, which, according to Alden Mason, may "depict eyes, nose, mouth, and arms." A similar one was secured by digging in a house or temple



Pottery whistles, center one 4 1/2 inches long, from Province of Magdalena, Colombia.



A



B



C



D



(top) Gold ornaments from Chiriqui, Panama.
(bottom) Gold bird ornaments, center one from Colombia,

site at La Cueva. The La Cueva one is black, two and three-eighths inches long and one and five-sixteenths inches in diameter.

These two stones, in my opinion, are as important as any artifacts yet found in the Tairona field. I see in them the same technique—or an imitation of the technique—which was used in the petroglyphs found near Donama and Recuerdo. I would make the same statement of a cylindrical stone in the Berlin Museum, which is said to be from the Don Diego, except that I have not seen it. Alden Mason says, however, that the Berlin Museum piece and my stone cylinder from Pueblo Viejo are of a technique “which may be presumed to be relatively late.” I agree heartily that these two artifacts appear to be of late manufacture. Although the technique was employed at a late period in these two cases, I consider it to be a revival of one of the oldest techniques shown in the stone carving of the Sierra Nevada de Santa Marta. I am convinced that this technique was used on the stone from La Cueva, and I lean to the belief that the stone is of a rather early date.

In all three of these pieces, but more particularly in the La Cueva stone, which I believe to be early, there is a certain quality which I consider symbolic of water worship. The same quality is seen in a gold figurine which I purchased from a Colombian at Bonda, described by Dr. J. Alden Mason as follows:

. . . a unique animal figure now in the University Museum. Apparently some marine animal or an insect is represented, although the head is human. The figure is of a gold-copper alloy, cast on an earthen core. The back is flat except for two relief metal loops or rings for suspension. On the body were two pairs of fins or wings, divided into four segments. The tail is forked with five divisions, like the fins.

The markings around the curiously joined legs or tail of this creature and the markings on the three stones under discussion are, in my opinion, similar, and not one of them is a "straight" line. There is not a straight line in any of these four objects, in my opinion, and there are no straight lines in Tairona petroglyphs. The point is that the Tairona artist never repeated and never used a straight line, except for the depiction of sunlight (the sun's rays). I believe that an unprejudiced artist would admit that these three stones show a subconscious curve complex, such as may be noted in the petroglyphs found on boulders throughout Central and South America. This is the curve complex of the water worshipper.

Personally, I think it is obvious that the earliest, the latest, and the strongest influence in Tairona art came from the people who carved those big boulders near running cold water, which is the melted snow from the summit of the Sierras. It does not matter whether one concludes that the carvers of the petroglyphs were *earlier* Taironas, or whether one prefers to see them as a remote people, exercising a strong, though roundabout, influence on the Taironas, such as the Greeks and the Mayas have exercised on the people of the United States. Those three incised cylindrical stones have a torrential but controlled, an explosive but studied, force in them which is the inspiration for the best artistic expression in Tairona stone, pottery, and wood (as evidenced by the carved temple staffs of the Kagaba shamans which, as Preuss first pointed out, are Tairona). It is remarkable how the little gold figurine of a "marine animal" ties in with the expression in small stones, early and late, of the national "people-essence" of the men who hammered the petroglyphs out beside loud waterfalls.

The enormous quantity of stone beads, especially carnelian beads, is the most conspicuous of all features of Tairona archaeology. The native Colombians, who have extremely little interest in Tairona archaeology beyond their ever-present hope of stumbling on a cache of gold, are, nevertheless, appreciators of the beads. Taganga fishermen intersperse their fishing trips with digging in such Tairona sites as they may find near their camps by the beach between Santa Marta and Dibulla. They know that, even if the coveted gold is not found, they are pretty certain to find beads. And they know there is a steady market for the bright polished ones (*vivos*) among the rich Goajiro Indians. The leftover *mueritos* (the dull, "dead" beads) can be sold to the poor Kagabas and other "Arhuaco" tribes. The Goajiros, who estimate the price of most things in domestic animals, consider a good *vivo* worth a mule. This makes it more valuable than some wives. Four goats (for which I might have bought an old Goajira wife) are equivalent to four-tenths the price of a mule.

Stone beads were found of quartz crystal, agate, steatite, green slate, jadeite, serpentine and other stones, but the carnelian are as numerous as all the others combined. They are also much more valued by the modern Indians. Goajiros particularly value the rare spherical type of carnelian bead which they call *tumas*. The Kagabas also prefer the carnelian to the others. All the beads are of a variety of shapes and sizes, especially those of carnelian and quartz crystal. Tubular, barrel-shaped, and cigar-shaped beads are commoner in these two stones than spherical ones are.

No Tairona mines have been found and the geology of the Sierra Nevada has been studied very little. If the beads were brought in by trade, instead of being made of stones found in this region, the crude stone rather than the

finished product probably was imported. That would be the inference from the fact that unfinished beads, or small stones of carnelian and quartz crystal, were often found either within burial jars or in house sites where no burials were found.

Most of the beads were perforated for stringing by a conical drilling from one end, which met a conical drilling from the other end in the middle of the stone. Hard enough in any case, this drilling process must have been extremely difficult on some of the long tubular beads. It is not known whether hand drill, pump drill, or bow drill was used; or whether the drill was pointed with bone and used with sand as an abrasive.

I found a considerable quantity of unbored beads, obviously incapable of being strung. I have reason to believe, because of the position in which they sometimes lay, that the bored beads placed in graves had been put there often in the form of a necklace. Eight or nine per cent of the beads which I found were unbored. All of them are cylindrical, barrel-shaped or cigar-shaped. Many of them had been used in necklaces.

The typical Tairona unbored, hard stone bead is known to the Colombian treasure hunters as *doncella*, a name the Kagabas use in their negotiations with white traders. Of course, this is a Spanish word meaning "damsel." No one with archaeological training would confuse a *doncella* with an unfinished bead. The stone is highly polished. The process of shaping it has been carried out with meticulous care. It is obviously a stone object never intended to be worn by suspension.

Now we come to the gold which we found on or near this "Coast of El Dorado."

When metal is found in Tairona sites, it is nearly always

gold. Some specimens of almost pure gold are found, and some with a varying degree of copper alloy, but very few of pure copper.

Although the Spaniards never succeeded in locating the mine, or mines, from which the Taironas got their gold, they did acquire—either as tribute or by looting hidden caches of the Indians—enough gold to feed their hope of finding the legendary El Dorado. Since the Conquest, Spaniards and Colombians have sent expedition after expedition in search of treasure, so that, as Dr. Mason says, “the remaining unrifled graves and sites can be but a small fraction of those existent at the time of Columbus.”

The Tairona gold objects found by Dr. Mason in 1922–23 have been studied by Mr. Henry W. Nichols, of the Field Museum of Chicago, to whose work the world is indebted for most of what it knows about Tairona metallurgical technique. Mr. Nichols concludes that the Tairona gold probably was secured by placer mining. I quote from Dr. Mason’s summary of Mr. Nichols’ findings:

The method of smelting is unknown, though some of the older contemporary accounts may afford some data upon this topic. Charcoal was probably employed, possibly bellows were used, possibly a natural draft up a canyon. The techniques used were apparently casting, soldering or welding, cold hammering, plating, and repousse and wire decoration.

The favorite technique was apparently casting around a core made of clay or loam. This was probably done by the *cire perdue* process. It is uncertain if the core was baked before the casting. . . . Decorative elements were often added later by means of soldering or welding, gold being used for the solder, but often gold of another degree of fineness. Other elements were joined by hammering, but the gold was probably first heated almost to the point of fusion.

Rolled rings were joined in this manner, the joints sometimes evident, at other times so well hammered as to be in-

visible. Faults in casting were often remedied by hammering bits of gold, often of a different quality, over the fault. Some of the smaller objects seem to show a thin gold leaf of different quality laid over a gold base. Repousse work is common, but there are no certain evidences of hammering over a form; in most cases the ornamentation was done by tooling from the back. Gold wire was apparently frequently used.

Gold rings, usually earrings or nose rings, are among the commoner gold objects made by the Taironas. They are often found in association with burials. One of my laborers found one in a polished black vase which he dug up in a house site at Gaira.

A pair of gold earrings sold to me by the owner of a drug store of Santa Marta were found, he said, in a grave at Gaira. A gorget which James Hawkins secured while digging in a ditch near Donama is of a fairly common type, having arms like human arms in relief. We got a trumpet-shaped earplug from a house site at Cinto, which is new for this region and, apparently, for America.

At a spot known to travelers as La Cueva, on the trail some fifteen miles from Dibulla towards Pueblo Viejo, we found a very promising group of house sites. This place yielded the biggest Tairona bead ever found (a malachite one five and one-eighth inches long) and an interesting cylindrical stone with a rude human face incised upon it. More important were the two golden frog bells which I showed to Mama Damian at San Miguel and which he coveted, as I have described in Chapter Fourteen. One was thirty-one thirty-seconds of an inch long and the other was one and one thirty-second inches long. Alden Mason calls these, and similar ones which he secured, "toad bells." Of one, which I found, he says: "It is hollow, of thin gold, with a large suspension hole at the front that was made

when the object was cast. Mr. Mason was told, probably by the Arhuaco Indians, that the 'old mamas' (shamans) wore them on their shoulders in dances."

The fact is that Mama Damian specifically called this ornament *rana* (frog), not *sapo* (toad). Preuss uses the terms *Frosch* and *Kröte* almost interchangeably, and it may be that the Indians did not distinguish between frogs and toads in talking to him, as they did to me. Mama Damian gave me practically the same account of how frogs caused rain that Mama Miguel Nolavita, of Palomino, gave Preuss. There can be no possibility of my having prompted the old shaman, because at that time I had not read this particular passage from Preuss.

I bought a third gold frog, slightly smaller than the two I found at La Cueva, from a farmer living just outside the cemetery at San Pedro Alejandrino.

The story of Taiku, Master of Gold in Kagaba mythology, which Preuss secured from his Kagaba informants, was confirmed to me by Mama Damian when I showed him the La Cueva golden frogs. (A similar story was told the German ethnologist by the Cara Indians of Mexico.)

Taiku and his younger brother, who is master of the fields, are sun deities,* and both of them belonged to the tribe called "Younger Brothers." They lived between the region of modern Pueblo Viejo and the sea. Taiku, a visiting god, brought gold to the ancient Indians. His brother, Master of the Fields, ran away when he was asked to make male and female human sex organs out of gold. He said he would come back. Preuss seems to think this throws light on why the Kagabas have failed to smelt the gold in their streams. He thinks they are waiting for Taiku's brother to return.

* The Kagaba word for gold (*niuva*) means "sunny."

In June, Taiku comes back to the Rio Lagato beyond Dibulla, but he does not enter the mountains. The strong rain of June means that Taiku has arrived.

A Kagaba told Preuss of a "Tairona Mountain" which is nine days' journey from Pueblo Viejo and is supposed to contain a cave filled with ancient treasures. (Nine is an important number in their mythology. How near would nine days from Pueblo Viejo put a traveler to the cave "in a curiously shaped mountain" reported by Tucuca and Macca Indians to Theodoor de Booy and seen by him, from a distance, in the Sierra Perija on the Venezuelan-Colombian border in 1918?) Kagabas told Preuss that this mountain is not known to the Indians of Palomino, and that the Indians of that village get their gold and stone beads partly from coastal graves and partly through purchase from Colombians.

It would throw an interesting light on the Kagabas to prove that they robbed Tairona graves. I believe that the statement of Preuss's informant is open to serious question. The Kagaba shamans have taught their people to venerate the memory of the Taironas. If any grave opening is done, it is probably done by the shamans with ritual. The Kagabas believe the dead go into their respective mountains, according to the social position they had in life. The dead shamans go into their temples in the mountains.

Chapter Eighteen

KAGABA-TAIRONA CONNECTIONS

THE BEST SUGGESTION WHICH Professor Saville gave me before I went into the Tairona country was that I take a leaf out of the notebook of Dr. Erland Nordenskiöld and combine archaeology with ethnology. When Dr. Nordenskiöld was puzzled by artifacts which he had acquired by excavation, he showed them to modern Indians and obtained a satisfactory explanation. However, there is always the danger, in this procedure, that the modern Indian may tell one what he thinks one wants to hear. At least, he may yield to the normal human desire to appear important by seeming to be wise. Nevertheless, when the information is not being paid for, a methodology of this kind seems valuable. The Kagaba understanding of Tairona ritual and of Tairona artifacts might not have been revealed to me if I had not carried duplicate artifacts from my excavations up into Kagaba country for trade after shipping the most important collections to New York from Santa Marta.

I found ten major evidences of cultural similarities between the Kagabas and the Taironas which I will summarize briefly.

1. The big stone roads and stairways found in the Kagaba country are identical in construction with those in the abandoned Tairona area on the lower slopes of the same mountains. Kagaba headmen told me that all the megalithic work in the two areas had been done by ancient Kagabas under a political and economic alliance. By the terms of this alliance, the Kagabas made the masonry and performed much of the heavier labor for both tribes. The Taironas made the goldwork and stone jewelry for both tribes and gave the timid and tiny Kagabas protection against other warlike tribes.

2. The stone ring foundations of Kagaba houses are similar to those found in Tairona sites. Spanish descriptions of Tairona houses and temples indicate that, above the stone foundation, the structure closely approximated that of the Kagaba mud-and-wattle wall and thatch-roofed building or the thatched wall and thatch-roofed building of today.

3. Stone praying seats, over the graves of Kagaba mamas, match those over Tairona graves which archaeological evidence indicates were the graves of higher ecclesiastics.

We found a small, four-legged steatite bench (two by one and four-fifths by one and three-fifths inches) at Pueblo Viejo. The ends are slightly raised above the main part of the seat, a fact cited by James Hawkins in his argument that the object is not to be considered a bench at all, but some form of goldsmith's tool, probably a vise. However, as five rather similar specimens are found in four other collections, I am inclined to agree with Dr. Mason, who calls them "miniature seats . . . especially characteristic of the Tairona region." Dr. Herbert J. Spinden bought the first two in Santa Marta, Mr. Nicholas got another near

Dibulla, Dr. Alden Mason secured one by excavation at Pueblito, and I got one by excavation at La Cueva.

Mama Damian of Kasikiale and his son, the assistant mama, voluntarily told me a legend about them. The legend was the one from Preuss, quoted in Chapter Seventeen, relating that the Tairona shaman, Kasingui, changed such small stone stools into pumas which ate the tribe of "Younger Brothers" who lived north of Pueblo Viejo. That is why, according to Mama Damian, the Kagabas use black wooden stools in their temples today.

4. The chewing of coca characterizes both the Kagaba and Tairona cultures. Relief design on pottery frequently depicts the chewing of coca. It is not chewed by the modern Goajiros, although the habit was ascribed to the seventeenth-century Goajiros by an early Spanish writer, Antonio Julian, who probably confused the Goajiros with the Taironas, or with some other tribe.

5. The diets of Taironas and Kagabas show marked similarities.

6. The costumes of the two peoples are similar, including turkey-feather headdresses, treatment of the hair, beads and breast pendants, and cotton shirts or tunics. There is no doubt that the ancients wore cotton clothing, and apparently a sort of tunic which came just above the knees was common. (The modern Kagaba tunic hangs a few inches below the knees.)

Perhaps some of the people who lived in this region had beards. An unusual item from Pozos Colorados was a sherd, not only showing the rather frequently depicted chewing of coca, but also exhibiting a conventionalized beard. I saw no examples of beards among the modern Goajiros, and only one among the Kagabas. That was the beard of Sylvestre Labata, consisting of a few sparse long hairs on

his chin, of which he was inordinately proud. But the décor on this sherd represents a rather thick hirsute ornament.

7. The Kagaba and the Tairona used similar musical instruments, particularly flutes, drums, calabash rattles, and trumpets.

8. They had similar burial customs. Both cultures are marked by the prominence of urn burial. Among the Kagabas this is original, or primary burial. Among the Taironas it usually was secondary burial, but several cases of primary urn burial were noted. So was the use of broken pots to wedge mamas' bodies into burial urns—as is done by the Kagabas today.

9. The two peoples have linguistic and religious connections. Although the languages of the two peoples are possibly of different stocks, Kagaba being Chibchan and Tairona being perhaps Carib, there is great significance in the fact, established by Preuss and corroborated by me, that Tairona has been the language of the Kagaba church and still is venerated as such. It has been kept alive by two or three of the older shamans, but will probably die soon. Mama Miguel Nolavita of Palomino and Mama José Dingula of Macostama are said to speak Tairona fluently.

The Kagaba pantheon contains many gods and demons borrowed from the Tairona. Much of the Kagaba ritual and religious lore had a like origin. The Kagabas apply the term "Younger Brothers" to tribes with whom they do not recognize a relationship, but with whom they live on friendly terms. "Younger Brothers" is what they call the tribes which formerly lived below Pueblo Viejo on the road to Dibulla. Preuss thinks these tribes were linguistically related to the Kagabas. In the accounts of Kagaba mythology given to Preuss by his informants, "Tayrona" was referred to frequently as a "younger brother."

10. Finally, Kagaba mamas and headmen showed a great deal of ability to interpret several types of Tairona ceremonial objects shown to them, and great avidity to possess them. I have related already (in Chapter Fourteen) the rather pitiful desire of Mama Damian to possess the golden frog bells, and how in his anxiety he gave me information about them.

He gave me further information when I showed him some doncellas (unbored beads). He referred to them at once as "doncellas" but did not offer any Kagaba word for them.

"But the doncellas," he said, "were the special property of the ancient mamas. The beads with holes in them [he used the word *cuentas* which, literally, should be applied only to the beads of a rosary] belonged to the rich people. Only the mamas had the gold frogs and the doncellas." He was induced finally to sell the mat from his temple, in exchange for two of the carnelian doncellas, which he valued more than the quartz-crystal ones.

Other important Tairona ceremonial objects are the stone "batons" which were discovered by J. Alden Mason and described by him:

A group of ceremonial stone objects . . . termed "batons"; they are apparently peculiar to this region and there are no criteria from which to determine their use. Practically all were excavated from circular sites where they had evidently been interred, almost always together with other ceremonial objects, and undamaged; they are therefore obviously of ceremonial and not of utilitarian nature.

They have the general form of clubs, generally with one end enlarged and decorated, evidently the butt, and with the adjacent part constricted, evidently for grasping in the hand. The shaft is, with one exception, plain, and in most cases diverges slightly toward the end. None has any drilled hole or

other method for suspension, and it may therefore be presumed that they were carried in the hand in aboriginal ceremonies. Hence they are considered as batons. They were frequently associated with monolithic axes and evidently had a similar use.

I did not find any of these stone "batons," but an explanation of them may lie in the wooden baton called a *haduka*, which was sold to me at Palomino by the *comisario*. It is thirty and three-fourths inches long, seven-sixteenths of an inch thick, one and three-fourths inches wide at the base and two and one-half inches wide at the top. It has incised lines on one side. The *comisario* declared that such *hadukas* are carried by Kagaba shamans as symbols of their authority during some of the more important ceremonies. He said this particular *haduka* was an inheritance from the Taironas. The relationship of the wooden *hadukas* used today by Kagabas to the stone ones buried by Taironas was confirmed, on my later visit to Colombia, by Mama Damian, who added: "Tairona is very important for Kagaba culture." The Taironas had a great mastery of magic and could, according to Mama Damian, disappear from a closed hut by making themselves invisible. With absolutely no prompting Mama Damian gave me many of the same stories of Kagaba mythology about the Tairona which had been given Preuss by his informants.

Most important of all the ceremonial objects used by the Kagabas are the wooden masks of gods. The one I had bought from Tuvata with many misgivings was now in the Museum of the University of Pennsylvania (which prefers to be called University Museum of Philadelphia). Ever since my return to the United States I had been bothered about having deprived the Indians of this integral part of their religion, and I now determined to take it, or a copy of it, back to them. My motive was partly a sense

of justice—call it sentimentality if you like—and partly an ethnological curiosity. I hoped that the gratitude of the Indians at getting something back from a white man would induce the mama to identify the mask. Was it of Tairona origin? That, specifically, was what I hoped to find out. Certain incised lines on the mask suggested that it might represent the beneficent sun deity, Seizanqua. I had compared it with photographs of masks at Noavaka made by Preuss and felt there was a distinct similarity.

Horace H. F. Jayne, Director of the University Museum, was cordially in sympathy with my plan and ordered a cast of the mask made for the Museum. When he turned the original over to me at a send-off party, he incidentally showed me how to open a beer bottle with a quarter, a trick which was to stand me in good stead when I got back to the Kagabas. A bit of parlor magic is always an asset to an ethnologist meeting "primitive tribes."

Before I left the United States the return of the mask had become a subject of much discussion in lay as well as scientific circles. Some people thought I was heading for danger and that the Kagabas might kill me. Other anthropologists shared my belief that the Kagabas might give me valuable information about the history and use of the mask in their religious ceremonies.

Inasmuch as Hawkins had been with me when I got the mask, I was anxious to have his help when I returned it. When he wrote from Santa Marta that he would accompany me he added that it would be "a very interesting but very ticklish business." Unfortunately, the day after I reached Santa Marta, Hawkins came down with malaria, and I was forced to start for the Kagaba mountains alone.

I knew I should miss his ability in handling the Indians, but I was counting a lot on the beard I had begun to raise

before leaving the States. A beer-bottle trick and a beard may seem an odd equipment for an expedition which might prove dangerous, but I knew they would both prove useful—the beard because I had worn one when I got the mask and felt it was important for the Kagabas to recognize me when they saw me wading the Rio San Antonio.

At Dibulla—that depressing Colombian seacoast village of dirt-floored huts whose inhabitants of mixed blood have the apathy of the Indian without his dignity, the impertinence of the Negro without his humor—I persuaded a tough Dibullan named Ulpiano Flores to go with me. I did not tell him about the mask. This may seem unfair, but I was afraid he would not go if he knew.

My destination was Palomino, where Tuviata had brought me the mask. But when we reached Pueblo Viejo, which is the natural jumping-off place for any trip into the Kagaba country, I was told that floods had made the always difficult Palomino trail impassable. Both the Colombians and the Indians refused to risk mule or baggage bull for the trip to Palomino. This was a disappointment, since I had particularly wanted to give the mask to Mama Miguel, from whom I suspected Tuviata had stolen it. Walking to Palomino was out of the question, even though I had taken no more personal equipment on this trip than I would have taken for a week end in Connecticut. (I had not even taken a hat.) I had brought trade goods and anthropometrical instruments and cameras and food. You can never count on getting food from the Indians and they will not serve as porters. At least one baggage bull was a necessity.

However, Mama José de la Cruz Dingula, the oldest and most important of all Kagaba shamans, was at Macostama, the site of the most influential temple of the Kagaba re-

ligion. Yes, I could hire mules and a bull for the trip to Macostama. The Colombians and Indians agreed that the trail would be passable. It had not been visited recently by such a landslide as the rains had loosed upon the narrow and precipitous path to Palomino. Macostama is southwest of Pueblo Viejo and higher than any other considerable settlement.

We reached the largest Kagaba village, San Miguel, which has only eighty-one houses, at four o'clock in the afternoon. The narrow, southward-ascending valley in which the village lies was already filling with shadow under the foot of the mountain. As our lathered mules skirted San Miguel's northerly "suburb" of Kasikiale an old Indian woman passed us, knitting as she walked. She glanced timidly at Flores, who was ahead. The Kagabas do not like the Dibullans. Then she looked at me, smiled with recognition, and replied warmly to my hail of "*Henshigah* (Good day)." This reassured me, for I remembered her as the wife of an Indian who had sold me many poporos and knitted bags on my visit here five years ago.

As we crossed the little brook just outside the northern gate into San Miguel two men stepped out of a plantain patch. One was my old friend, Juan Sico, who had been comisario.

"*Shikishvelo, Napaybo* (How are you, Friend)" he cried.

"*Napaybo*," called his young companion, too. I remembered the youth as one who had sold us a much-wanted chicken, refusing all offers until I had finally broken down his sales resistance with an old, twenty-five-cent jackknife.

The beard was working! My stomach warmed at this recognition from old friends. How often I had thought about them during those five years away in the overheated libraries of Columbia University, the chalky lecture rooms

of Southern California, in insane "story conferences" of Hollywood, and in the pitiless canyons of New York. And what a contrast to the first time I had entered this village!

It seemed Sico had been succeeded as comisario by José Antonio Labata, whom I remembered as a nephew of my old friend, Sylvestre Labata of Palomino. Sylvestre was dead! His nephew soon joined us and tears streamed down his face when I showed him a photograph I had made of Sylvestre in 1931.

I had brought two bottles of beer from Dibulla. I opened one with a quarter (legal tender in Santa Marta). The comisario's eyes opened in admiration. He drank one bottle, then insisted that he would go with me the next day to Macostama, the Kagaba St. Peter's.

It was good to be back in the Guest House again, with the smell of the damp earthen floor and the cool odor of small new potatoes which Comisario Labata's sixteen-year-old son brought us, gaping when I ate one raw.

That night orange lines of flame, climbing with a frightening regularity, were etched against the blackness of the mountains. From the temple of Kasikiale, half a mile away and two hundred feet lower down, came the muffled throbbing of drums. The New Year's ceremonies, which no white man ever has been allowed to see!

It was early February by our calendar, but the Indian greeting to the new agricultural year lasts many days. Now I remembered: The fires were not magic but were merely the Indian farmer's precaution for improving his pasturage.

At five o'clock in the morning Flores and I wolfed a breakfast of cold fried beans and rice. The comisario, José Antonio Labata, joined us at the south gate of the village and gave us news which meant much more to me than he or Flores realized. Tuviata was now living in San Fran-

cisco, he informed me while I took a pebble out of my shoe. He added the interesting comment that Tuviata "is not much liked by our people now because he stole the two wives of José Mata, of Palomino, and he angered Mama José Dingula when he burned the house of a Colombiano in Pueblo Viejo. Tuviata is *malo*. He will fight anybody, Kagaba or Colombiano, over nothing. Mama Dingula is very angry."

In discussing the return of the mask Hawkins had said to me: "The man we have to fear most is Tuviata. He may blame it all on us."

It is uphill all the way to Macostama. The lines of fire on the mountains ahead were eating the hills like snakes. The sound of drums back of us and below was fading out.

Just ahead I recognized the little plateau on which stood the temple of Takina. Its walls of dead grass (the temples at lesser altitudes have walls of palm thatch) made it look cold even in the morning sun. Hobbling toward us like an invalid was Mama Asunción, whom five years before I had puzzled with the gift of the first can of sardines he had ever seen.

I was doing some quick thinking. Mama Dingula had refused to see us on my first visit. He was known to be angry now, and he might well refuse again. I decided to show the mask to Mama Asunción.

His face was thin with fever, his body thin with the disease which was eating him, his voice weak as he greeted me as "napaybo" and asked if I had any medicine. I was full of malaria myself (although I had it under control at the moment) and always carried a bottle of quinine in my pocket as a boy might carry lemon drops. I gave Asunción a dozen five-grain pills, and directions how to take them. Then I unhinged the little box holding the mask which I

had been carrying in a Kagaba bag slung over my shoulder.

Mama Asunción's eyes lighted with marked repugnance as they took in the mask. "Malo," he grumbled and began hobbling back toward his temple.

I grinned at Flores. "Vamonos," I said. We started up the trail toward Takina. Flores had never batted an eye at the mask. The comisario seemed wrapped in thought, but at least he was sticking to us.

As we went up the last steep mile to Macostama my heart was shaking my soft, city body as its motor shakes an old Ford. We turned the shoulder of the westerly mountain and saw the big pyramidal temple of thatched straw, with the funny structure on its peak, looking like a hay wagon prankish boys had put on the steeple of a church at Halloween.

Mama José de la Cruz Dingula had refused to see me five years ago. He had sulked in his temple, rebuking my companion of that trip, Mama Damian, for being too friendly with strangers.

Now the comisario knocked on the door of the temple. The assistant mama put out his head and said that Dingula would speak to us.

In three or four minutes he came out, a tiny old man leaning on a carved wooden staff of the hard black palm which the Taironas had often used as arrow points to shoot Spaniards.

I handed my camera to Flores, who fortunately was able to manage it, unlike Hawkins who never had been able to locate an object in its finder through the forty-cent spectacles he had bought in the public market at Cartagena. I took the mask out of the little box which had been made for it by a carpenter in Los Angeles. I held it toward Dingula.

There was recognition in his eyes, also amazement, and fear.

"*Malo, es Diablo* (Bad, it's a Devil)!" he croaked.

He shrank away and started to go back to the door of his temple.

"Mama José, I came many, many jornadas to give this to you," I said.

"No, no—*malo*."

"*Seizanqua*?" I raised the mask higher in the sun.

"No, *malo, muy Diablo* (No, bad, very Devil)." The temple door closed behind him.

I helped Flores close my camera. Fortunately, it turned out, he had secured a very good snapshot of me in the act of offering the mask to the old mama, who, according to Flores, was a hundred and fourteen years old. Flores had a fair check on this because his grandfather, then eighty, had visited Dingula in 1902 and had concluded, by reference to certain events in Colombian history which both he and Dingula remembered, that they were exactly the same age.

I put the mask back in the box, put the box in the fiber mochila. It felt hard against my side as I stumbled downhill toward Takina; it felt like a lump of lead before I reached San Miguel. The comisario was very glum on the homeward trip. Was he fearful, too? Would Mama Dingula now be angrier than ever at Kagabas who consorted with foreigners?

I had been warned of danger in returning the mask. I had hoped for gratitude which would lead to information. What had happened was unexpected; it had not been predicted by any of the other anthropologists with whom I had discussed returning the mask. The two mamas had been afraid. My questions had been answered only negatively. The mask obviously was not *Seizanqua*, but a demon.

My one chance now was that Mama Damian, who was "too friendly with foreigners," would tell me more about the history of the mask. That same day we went down to Kasikiale and I again opened my box. Mama Damian was astonished, but less afraid than the other two shamans. He was even willing to handle the mask—rather gingerly. He finally went and brought out the good mask, the sun-god mask, he had let me see on my first visit to his country. But when I suggested that we exchange masks he was as near to indignation as I had ever seen him. Like the other mamas he kept applying the word *malo* to the mask sold me by Tuviata. In Spanish the word *mascara* (mask) is feminine, the word *Diablo* (Devil, or Satan) is masculine. The three Kagaba shamans who saw the mask all used the masculine adjective *malo* in expressing their opinion of it.

But after we had reminisced about my first visit to Kasikiale and how he had performed the "four wind ceremony for travelers" for Hawkins and me in this very temple Mama Damian thawed out a little. He told me definitely that both my mask and his were of Tairona manufacture, "*hace muchos siglos* (many centuries ago)," and had been handed down to the modern Kagabas through generations of Tairona and Kagaba shamans. The Kagabas themselves had never known how to make such things, he said.

Finally, in response to my question as to whether the mask might represent Hisitana, he replied gravely that it did. In Tairona-Kagaba mythology Hisitana is the Father of the Kingdom of the Dead.

Inasmuch as none of the three Kagaba shamans to whom I showed the mask wanted it, I took it back to the University Museum of Philadelphia. My trip with it had, however, confirmed existence of another link between Kagabas and Taironas.

Chapter Nineteen

A STAIRWAY INTO THE PAST

WE HAD HEARD RUMORS, during my first visit to Colombia, of a great ruined city which the Kagabas regarded with reverence. It was always mentioned as "the Tairona city." It sounded to us as if it might be Tairo, one of the six great cities of the lost nation. James Hawkins kept this in mind and, whenever opportunity offered, gathered other stray bits of information from the Indians. Then, just before I returned to Colombia with the mask, Hawkins happened upon the outskirts of a big archaeological site which he had no opportunity to explore. Its general location recalled the unknown "Tairo" to him and he kept his information about it for me.

Hawkins had recovered from malaria when I returned to Santa Marta after showing the mask to Mama José Dingula, and was able to go with me into the thick bush about thirty miles east of Santa Marta. First, however, I visited some ruins at Recuerdo and Cacavalito in the central foothills, where there are not many signs of ancient habitation. We found several excellent large house sites, a group of grave-stones, and many pieces of aboriginal stone road.

When we went to the larger site which Hawkins had located, we found the vegetation so wild and tangled that it was impossible for us to bring our baggage animals with us. The site is at north latitude 11 degrees 15 minutes, and west longitude 70 degrees 5 minutes, or about three miles south of the sea and twenty-nine miles east-by-north of Santa Marta. It has features of both East Coast and South Coast Tairona archaeology and is, therefore, a link between them and an evidence that such Chiriqui influence as reached the South Coast may have been felt on the East Coast.

The trail from Santa Marta to Rio Hacha runs eastward through Calabazos, a cattle ranch which is about eight miles west of the site. We left the trail at Calabazos and headed north, climbing a steep grade through very thick, low bush. At the top of a hill three hundred feet high we swung eastward where the going was less steep. After an hour we came to a small quebrada flowing against us and were able to make better progress by walking up the stream bed. In another hour we reached a short hill which was the local "great divide." Crossing it we found another quebrada going in our direction and, by sloshing along in the shallow water, were fairly free of the thorny undergrowth.

Three hours and a half out of Calabazos we came to a steep stairway made of flat stones averaging twelve inches long and eight inches deep. The grade was almost thirty-five per cent. We stood at the head of the stairway and caught our breath during one of the most exciting moments I have experienced during my career as an archaeologist.

Stretching below us on both sides of the stairway were terraced hillsides bearing the stone ring foundations of a long-vanished habitation. The terraces led down to where

the jungle had encroached on other evidences of centuries of man's handiwork. We followed the somewhat broken stairway downhill into what had been in the past a populous center of the lost Taironas.

The stairway led us through vegetation to the eastward for approximately three hundred and fifty feet. At its foot we came to a bridge of huge, flat-topped boulders which gave passage to the other side of a stream, which was sixteen to twenty-two feet wide and contained very little water at that season.

The term "bridge" may need explanation. The ancient Indians who built this site had moved roundish boulders into the stream in such a way as to leave ample space for the water to flow between them. Then they had placed the flat slabs, which served as steppingstones, on top of the boulders. How they did this is as mysterious as it is wonderful. Some of the supporting boulders must have weighed two or three tons. Some of the top slabs were about seven feet long and more than three feet wide. The Taironas, like other American aborigines, had no beasts of burden and it is doubtful if they had pulleys. Straining man power and the cunning of great craftsmen had built this bridge and another one, similar to it, about two hundred and twenty-five yards downstream. At other points, over two smaller brooks which went through the ruined town, we found four smaller bridges.

The main quebrada came out of the southwest and ran northeast toward the sea. Two other quebradas came into it from the east, one of them just north of the first bridge. The greatest extent of the city was in a west-east direction. We followed a stone road eastward for about three miles before failing daylight forced us to turn back. House sites were numerous at each side of the road, over an area whose

breadth I was unable to determine through the thick bush.

It is unfortunate that we could not use animals to carry supplies into the ruins, so that we might have made a longer stay. All we could accomplish during the four days in which we were able to remain there was to make a very rough survey of what seemed to be the center; to clear trees from a few of the better made stone foundation rings and stairways in order to photograph them; and to explore a number of small but deep natural caverns, formed by the juxtaposition of great boulders at the base of several sharp, steep hills. The entire terrain is one of hills and ravines.

Several of the more shallow caverns contained sherds and had obviously been used as dumps. The larger caves, in which we found all the whole or slightly damaged pieces of pottery which we took out, had certainly not been used as dumps. Two of these caves—in front of which were stone rings indicating that houses had once stood there—had very likely been used as storerooms, possibly as temples. We found human figurines and a fox-head whistle deep under a big pile of boulders, each of which was as big or bigger than the average modern Kagaba hut. They were lying on the sandy floor at considerable distance from each other and with no apparent relation to any of the surrounding objects.

It should be stressed that these are not caves in the true sense: that is, they are not openings in the earth at all. They are merely dark pockets between tremendous boulders which piled up on each other centuries ago. True caves are rare in the Sierra Nevada de Santa Marta, but such great boulders are common throughout this region.

The character of the work shown on the cut stone in the circular foundations of some of the house and temple sites

here is as good as any I have seen in the Tairona region, not excepting Pueblito, which is conspicuous for this sort of thing.

One of the most interesting features of the site is a raised artificial mound a hundred and sixty-five feet long, sixty-five feet broad, and from three feet to nine feet high. It resembles, even in size, one of the "acropolises" of the southern part of the Maya area, such as the one I found at the site I called Ollitas, described in Chapter Six. The east face of the structure was supported by the highest wall I have seen in the Tairona area. It was constructed of stones from about the size of a man's head to four times that size, and it ranges in height from three feet at the south to nine feet at the northern extremity. It may deserve the term "megalithic," but it is by no means comparable to Inca masonry. The stones are piled on top of each other in the direct method by which the first white settlers of New England made the stone fences around their farms. Nevertheless, it is an architectonic accomplishment of which no builder would need to be ashamed.

An interesting feature at Site No. XVIII was two grave-stones. The larger one was four feet three inches high and fourteen inches broad. West of it, about three feet away, stood another stone six feet high and sixteen inches broad. Both slabs were thin, varying from three to four and a half inches in thickness. Both had a convex bulge at the very spot where they might have fitted into the small of a man's back. I believe that both had been the backs of combination grave markers and seats like the praying seats at Macostama. Such seats, as Saville had remarked to me, suggest the duho of the Antilles. What became of the bottom slabs?

At Site No. VIII, outside the foundation ring and lying

on its side under an overhanging rock, I found a true "goblet" Type D-1 burial urn, almost the exact replica of some I had found in graves at Pozos Colorados. The presence of the goblet connects this site with the culture of the coast south of Santa Marta, as the finding of the bird motif, crossed human arms, "chocolate pot," and pig-like "Visor-god" shows that the ceramics of the site are typically Tairona.

There were a great many wild orange trees around the ruins. On the way into the site our party began to encounter wild orange trees only a mile or so from Calabazos, but they became more and more frequent as we approached the ruins. They are so thick there that there seems no doubt that the outlying trees are descendants of a parent orchard once situated at the city itself. There are wild orange trees at Pueblito, but they are on the outskirts of the city. And at Pueblito the trees are not so numerous nor the fruit so large as at this other ancient Tairona town.

The first conclusion which the archaeologist comes to on finding an old-world fruit growing amid the stone vestiges of a new-world culture is that the Indians who inhabited these cities must have had contact with the Spaniards before the sites were abandoned.

It has been seen in Chapter Ten that the Spaniards mentioned six outstanding Tairona cities which they had known or heard about. They were Posigueyca (the capital), Mongay, Aguaranga, Sinanguez, Origueyca, and Tayro. Tayro is sometimes referred to as Taybo. It seems to be the same as the site sometimes called "Gran Pueblo" or "Pueblo Grande." These places are spoken of as being "inexpugnable" and guarded by "formidable" heights.

Because the country is mountainous, many Tairona sites were built on hills. The settlements at what are now called

Gaira, Nahuange, Gairaca, and Pozos Colorados are exceptions. There is also flat land at Bonda which was undoubtedly occupied. Pueblito has a certain amount of terrain along the river, which is not entirely up- and downhill. But I have seen no Tairona site in such consistently broken and precipitous country as this one under discussion. Even with the little evidence at hand, I suggest that this ruined town be called, tentatively, "Tayro," or "Tairo," to modernize the spelling.

Very likely the ruins of none of these six great Tairona cities ever will be positively identified. But the practice—stressed in the Maya area in the last two decades by leading archaeologists like Tozzer, Morley, Spinden, Lothrop, Kidder, Gann, and Eric Thompson—of giving Maya place names to Maya sites seems a sound one. It seems to me to be more gracious, at least, to try to assign Tairona names to Tairona sites than to afflict them with meaningless Spanish names.

Whether or not "Tairo" is actually Tayro, it is indubitably the remains of a considerable and important Tairona city. I saw enough of it in my two visits of one day and four days respectively to feel that my foreman, James Hawkins, is probably correct when he says that it is "bigger than Pueblito." It may seem surprising that the presence of a city so near to Santa Marta and the Rio Hacha trail had not been advertised before this report. But this will not seem remarkable to anyone who has experienced the difficulty of travel in the Sierra Nevada de Santa Marta, or who knows how thick the bush sometimes grows in that region. It would have been impossible for us to take even the most hearty and agile mule over those nine miles from Calabazos to the ruins. Burdened as we were with sleeping equipment, food, and shotguns, we were unable to carry

any digging tools except our machetes and one small shovel. One of my laborers suggested that a trail might be cut in a southerly direction from the ruins to strike the Rio Hacha-Santa Marta trail east of Calabazos. I think his idea might be worth looking into before any serious program of excavation is undertaken at this site. Calabazos is certainly not the point at which the Rio Hacha trail is nearest to "Tairo," and a survey of the country between the ruins and that trail would be worth while.

The summary of the results of my two expeditions to the Tairona area should enumerate the following five "new" sites as likely to offer promising results to future excavators: (1) Gaira, (2) Pozos Colorados, (3) La Cueva, (4) Pueblo Viejo, and (5) "Tairo." In every one of these sites at least one heretofore-unrecorded type of Tairona artifact was secured—in the first four by digging, in the fifth by a superficial exploration of small caves. All of them need much more study. My impression is that Pozos Colorados and La Cueva are the most interesting from the point of view of the "dirt" archaeologist. "Tairo" seems most attractive for the student of architectonics. Its possession of Type D-1 burial urns ties it with the South. Pueblo Viejo is a particularly fertile field for an archaeologist with a good knowledge of ethnology.

I hesitate to refer to my feeling that the Taironas were Caribs, for I have insufficient data as yet to call it more than a feeling. I would not mention it, in fact, if I had not learned recently that so high an authority on ancient South America as Mr. Philip Ainsworth Means had reached the same opinion independently. Mr. Means has authorized me to quote him on this point:

I have a strong suspicion that the Taironas were Caribs, as were also the Cara of Ecuador. The Caribs lived through the

early dynamic pressure when the land mass we call South America was young. Your evidence of close cultural contact between Taironas and Kagabas—a Chibchan-speaking people—does not change my opinion, for there is no reason to assume that the Chibchans may not have been Caribs also.

It is obvious that in the Taironas we have a case of a mixed culture. The mixture is between five definite highland, or Andean, culture traits and six definite Orinocan, or Antillean, culture traits.

The five highland traits found in the Tairona culture are: (1) absence of manioc with dependence on maize, (2) the use of coca, (3) the building of paved roads, (4) the construction of fine masonry, and (5) the making of black polished pottery.

The six Orinocan or Antillean traits are: (1) secondary urn burial, (2) the absence of flaked stone tools, (3) the manufacture of ungrooved axheads and monolithic axes, (4) stone seats like the Antillean duho, (5) fine work in shell, and (6) the absence of painted pottery and the importance of incised and relief decoration in ceramics.

Finally, it should be noted that there was apparently some primary urn burial in Tairona. Much rarer in America than secondary urn burial, this trait was also found among the Chorotega of Nicaragua and Costa Rica.

Believing that the Caribs swept over the Goajiros in pre-Columbian times and overlaid Carib culture traits on an Arawakan population, I suggest that these same Carib invaders coasted on westward with the trade winds behind them. Twenty-five miles took them from the region of modern Rio Hacha to the beginning of the true mountainous coast near Dibulla, where Tairona artifacts are plentiful today. (The snow-covered mountains are visible from considerably further east in the Goajira Peninsula

than Rio Hacha.) The same favorable trade winds would have helped big war canoes from the Tairona coast on to Panama and the Chiriqui region. And, according to native tradition, the drift of original migration along this entire coast was westerly.

I submit the theory that the Kagabas are the living tribe which the anthropologist would most profitably study for further light on the Taironas. I saw most promising sites for excavation where Kagaba temples had stood until a few years ago. With the rapid weakening of Kagaba prejudice against archaeologists, it will probably be possible to dig in such places in the not distant future. Similarly, Kagaba aversion to discussing Kagaba and Tairona traditions may be expected to decrease.

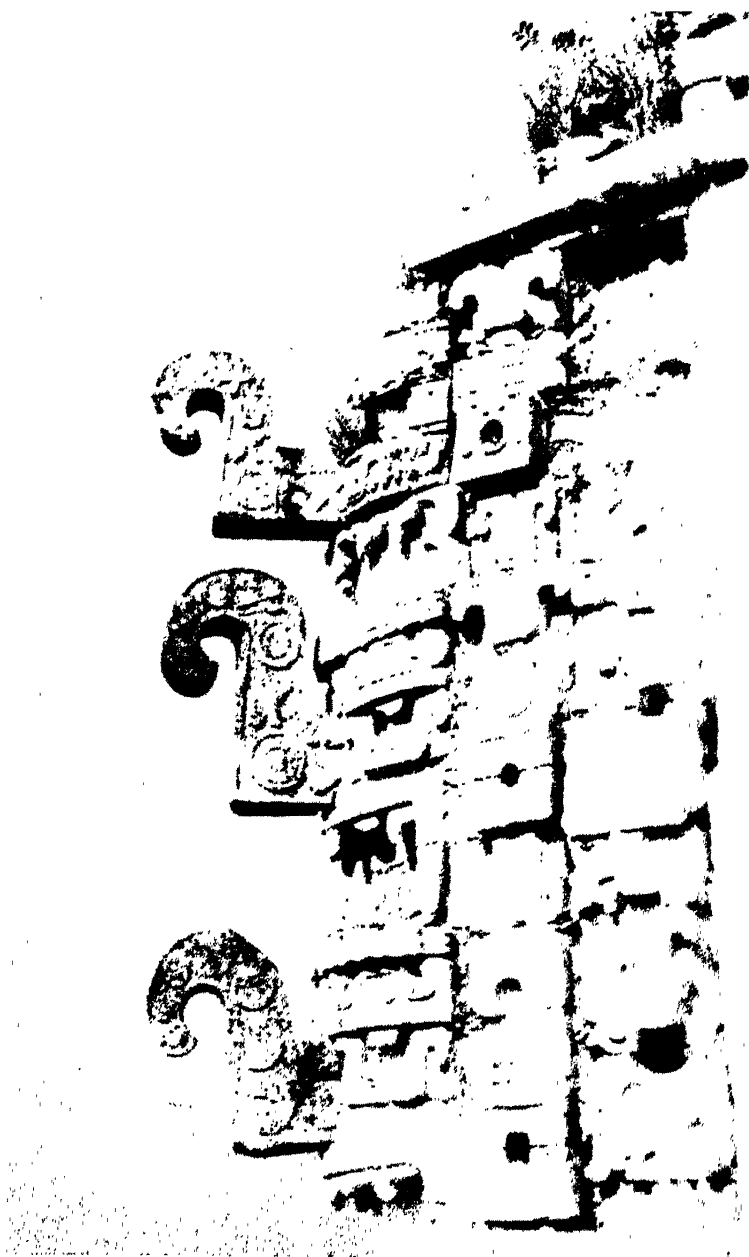
Almost no archaeological research has been done on the south side of the Sierra Nevada de Santa Marta. Very little ethnological or archaeological investigation has been made in a promising field some two hundred miles further south and southeast of the Kagaba country. This is the region of the Sierra Perija, on the Colombian-Venezuelan border. The Motilon tribes hereabout have been little studied, for they have been hostile to outsiders until very recently. De Booy says the region was originally held by Arhuacos, whom the Motilones killed or drove out, "probably only a short while before the Conquest."

The Motilones are known to be of Carib linguistic stock and are nearer to the Tairona coast than any other group of Caribs which has preserved its independence. The sacred cave of Kagaba legend which, if it exists, may be the burial cave Motilones mentioned to De Booy in 1918, is alleged to be in the Sierra Perija region. If any Taironas escaped the Spaniards, they may have gone this way. Certainly, careful search among the Motilones for memories or



(Fairchild Aerial Surveys 1)

(top) Types of Tairona pottery from "Tairo." Second from right lower step is a slipper pot similar to one often found in Honduras.
 (bottom) The Usumacinta River once formed the main link in a system of river short cuts which, with a short land carry, enabled Mayan mariners to avoid the 700-mile sea voyage around the peninsula



Three masks of the Maya rain god, Quetzalcoatl, at Uxmal.

legends of the Taironas, or for survivals of Tairona culture like those found by Preuss and by the author among the Chibchan Kagabas, would be worth undertaking.

Finally, I would urge the desirability of prosecuting further archaeological research, both in the Tairona coastal region south of Santa Marta, and in the Chiriqui field of Southern Costa Rica and Northern Panama. It should result in a fuller knowledge of that cultural connection between Tairona and Chiriqui which I believe my own findings have established. Archaeologically, this is the most important result of my work in the Tairona area.

Epilogue

TWENTY YEARS OF EXPLORATION

THE TRUE AMERICA, THAT great cultural land of antiquity surrounding its own private sea along the rim of what I like to call the Caribbean Bowl, has been more and more appreciated during the past twenty years.

A number of eminent men have contributed to the body of knowledge painfully wrung from this mysterious land of jungle and mountain. The mosaic of human life which is being pieced together from this knowledge begins to achieve a pattern. There is not space to review the work of these men in detail, but the bibliography of this book covers nearly all of it. However, I want to mention some of the leaders in this field who are my contemporaries, and some of the high lights which their work has projected on the culture of the Caribbean.

Among younger men, the work of Oliver La Farge and of J. Eric Thompson has been outstanding in ethnology. In archaeology the list is much longer, and the results are rather more showy to the eyes of the public.

Dr. Herbert J. Spinden's establishment of the fact that the Venus Calendar of the Mayas took its beginning from

certain celestial events in the seventh century B.C. is very important. Less important—though more likely to fire the imagination of the layman—was his discovery that the city of Copan, Honduras, had been a gigantic astronomical observatory. It had a line of sight between two stone pillars on opposite sides of the city which told the inhabitants that when the sun rose along that line two dates of importance in the farmer's almanac of the Mayas—April sixth and September sixth—had arrived.

Spinden's work with the hieroglyphs, and that of Morley, Beyer, J. E. Thompson, and Teeple, has reduced greatly the number of them which still defy translation. Teeple, by the way, was a man who got into anthropology by the back door. He was a chemist, who took up the glyphs for amusement, as other men have taken up cross-word puzzles. Similarly, Mr. Benjamin Whorf, an insurance salesman of Hartford, Connecticut, amazed the experts by learning more than they knew about the Nahua texts of the Aztecs of upland Mexico, although he worked at these only as a hobby. As this is written he has already made some progress in his effort to decipher the Maya glyphs.

Gann and Blom made a very important contribution to knowledge of the Maya area with their discovery of dates in the northern part of the region which proved those cities to have been occupied almost as early as those in the south. Prior to that, southern Maya cities had been considered much older. A date at Tulum, which is also in the northern area, proved to correspond to 333 A.D. by Spinden's correlation. That meant that this city, too, was occupied contemporaneously with Tikal, Copan, and others of the great southern sites. These discoveries make the old nomenclature of "First Empire" and "Late Empire" mean-

ingless. "Southern Empire" and "Northern Empire" are more accurate terms, if we still insist on any division.

Under the direction of J. Alden Mason and Linton Satterthwaite, the University of Pennsylvania has done a fine job of exploring the ruins of Piedras Negras, on the Usumacinta River, which was once crowded with the trading canoes of the Mayas. Dr. Mason succeeded in taking out several large stelae and shipping them to Philadelphia.

Probably the greatest single piece of restoration yet done in America has been the stupendous work accomplished under the direction of Dr. Sylvanus Morley at Chichen Itza, with Mr. Earl Morris in immediate supervision of field operations. What was merely a hill when I first visited Chichen Itza in 1922 has been converted into the magnificent, snow-white Temple of the Warriors. All the original stones of this structure have been recovered painstakingly and cleaned. Not a single new stone has been inserted!

While this work was going on, Dr. Oliver Ricketson proved that the so-called "Caracol," a curious circular building, had been an astronomical observatory. Lines of sight across its window sides and door jambs indicate the position of heavenly bodies at various periods in their peregrinations through the heavens, which was of much importance to primitive agriculturists. This building, exemplifying the astonishingly close co-operation between ancient Indian astronomers and architects, probably surpassed anything of the kind in the world at the time when it was built.

In my own work, I regard my reconstruction of ancient trade routes as more important than my discovery of a dozen or more cities (and ten new species of birds by ornithologists of my expeditions). I also regard the knowledge I acquired about the canal at Muyil as more important than the knowledge I gained of the city it led to. (This

was the first instance on record of the discovery of a Maya canal.) My finding that modern Maya Indians use the pagan temples for age-old pagan rites, burning copal incense and invoking the gods of the elements, was important, too. Added to similar findings of other anthropologists and to Oliver La Farge's discovery that the Maya calendar is used by modern Guatemalan Indian storekeepers, it proved the present day Indians to be direct descendants of our first Americans. My work establishing the Tairona-Chiriqui tie-up and suggesting a Tairona-Maya contact was first reported fully in my doctoral dissertation in 1938, and I have attempted to present it here for the general public. However, Preuss and Alden Mason, who seldom write for the lay reader, deserve as much credit as I for putting the unconquered Taironas, who hid themselves from the "gold madness" of the steel-armed Spaniards, upon the cultural map of the world.

Ludlow Griscom, ornithologist attached to the Mason-Spinden Expedition by the American Museum of Natural History, in 1926 discovered seven new subspecies of birds in British Honduras and Quintana Roo. One of these, an oriole first collected on Ambergris Cay, B. H., by the author of this book, was graciously named by Mr. Griscom, *Icterus cucullatus masoni*.

Mr. Griscom established the existence of some two hundred birds on the mainland of Quintana Roo (east coast of the Yucatan Peninsula) the majority of which had never been recorded there. He also proved the existence on Cozumel Island of about a score of birds not found anywhere else in the world, not even on the mainland, which is some twelve miles away. Almost equally remarkable is the fact that "at least 100 species of land birds are found on the adjacent mainland which do not occur on Cozumel

Island." This, says Griscom, "shows how sedentary many tropical species are."

In 1928, Oliver L. Austin, Jr., ornithologist working with the Mason-Blodgett Expedition for the Museum of Comparative Zoology of Harvard University, found forty species and subspecies of birds in the Cayo District of British Honduras which had never before been recorded there.

I have no very high estimate of the value of the work of the mere curio hunter or antiquarian. A study of the past is of value only if it is aimed to help us manage our own lives in the present and in the future. The dangerous labors of Douglas March, who collected snakes in order to make a serum to safeguard the lives of residents of the tropics, are far more important than those of a mere collector and classifier of serpents. The work of the anthropologist, who reconstructs a whole picture of the past, is more important than that of the useful scientist who devotes his life to the study of stone labrets, or the language spoken by the Coast Salish. Spinden says that "anthropologists fall into two classes, the splitters and the groupers." That is, those who devote themselves to the study of minute details, and those who put the details together to construct a broad conclusion. Both classes are necessary to society, but a good "grouper" is probably both rarer and more useful than a good "splitter." However, it has certainly been of use to modern medicine to learn what Indians have long known of the effects of lime combined with coca. It has been of value to industry to learn the uses of those Indian products, rubber, and the best kinds of cotton known to the world. It is of value to the student of government to know that state socialism worked for centuries in Peru, and that the Aztecs separated church and state before the English came across the Atlantic with

the same idea. Our engineers and architects have profited much by what archaeologists have told them of the big aqueducts and reservoirs and roads of the Incas, the roads and "set-back" skyscrapers of the Mayas.

I am often asked to advise young men how to get into archaeological exploration. I got in by the back door, via journalism and war correspondence. *The Outlook* sent me to Yucatan in 1916 to investigate a revolution and the State Government's monopoly of sisal fiber, which was worrying our farmers. I took a week off to go to the ruins of Uxmal, and knew at once that I wanted to change the direction of my career. It is better to get in by the front door if you can. If you are able to decide, when you are still young, that you want to be a scientific explorer, go to a good university and get a thorough training in zoology or biology or botany or anthropology or whatever branch of science you choose.

The last twenty-odd years have been good ones to me. I shut my eyes and hear the outboard motor buzzing into the little canoe harbor of the walled city of Xkaret. Up the creek which leads close to the acropolis of Ollitas, I see white herons or ibis or egrets flapping away over banks of trees, lacy with swinging lianas.

I see the tall towers of nameless cities, as we slashed at the vines to look up at them from the stones fallen at their feet. I am stirred by the inexorability of time as I remember our airplane banking around these same towers, the thunder of its motors bounding from the treetops of the jungle and sending bright-colored parrots and toucans flapping into the deeper shadows.

I can smell the oxide of iron which lends the scent of Yucatan a pleasanter spice than that of any other hot country. I can see great leather-colored snakes with diagonal

markings slithering through the dead leaves, and hear behind them the faint but ominous rustle of an ant army. I can hear the tusks of a herd of wild pigs rattling like cavalry sabers; and, far off in the hot marshes, the limkins wailing like sorrowing women. I can see the ultimate beauty of Palomino from the remote pinnacle of the Kagabas' own mountain.

I look at a map of the true America, the rim-like shores of the Caribbean Bowl. Pictures of vanished centuries stand out in imaginary bas-relief. The smelters of the Tairona goldsmiths flicker dimly above the majestic coast of Colombia. The white stone roads of Yucatan are dotted with pilgrims, journeying to the canoes which will take them to the sanctity of Cozumel. The silver temples rise in blessing over the rich, cultivated land which gives work to all men and plenty in exchange for the work. I smell the copal incense in the temples as I have often smelled it, and the odor has a magic which makes men remember that which they have never known.

Where are these Americans? Where are the men who, remote from the rest of the world, built one of the world's greatest civilizations around their private sea? Where did they come from? Where have they gone? Where are we going?

APPENDIX I

SOMATOLOGICAL TABLES

KAGABA MEN

Age	Stat. in Cm.	H.L. in Mm.	H.B. in Mm.	Ceph. Index	F.H. in Mm.	F.B. in Mm.	Face Index	N.H. in Mm.	N.B. in Mm.	Nasal Index
20	147.5	185	145	78.3	110	124	88.7	44	37	84
50	152.6	186	146	78.3	112	133	84.2	44	40	90.9
25	155.6	194	148	76.2	110	140	78.5	45	41	91.1
40	157.3	194	148	84.8	125	138	90.5	50	37	74
42	160.8	184	140	76	112	134	83.5	50	35	70
41	152.3	190	130	68.4	126	132	95.4	53	41	77.3
22	149.3	190	150	78.9	121	140	86.4	50	40	80
23	145.1	189	147	72.4	114	131	87	43	32	74.4
23	146.4	194	146	75.3	117	134	87.3	46	46	100
24	151	186	146	79.5	114	142	80.2	47	33	70.2
25	151	185	155	83.8	110	136	80.8	45	35	77.7
23	148.8	184	152	76.6	112	141	79.4	41	41	100
20	146.5	182	143	78.5	111	140	79.2	44	40	90.9
27	152	192	160	83.3	120	144	83.3	47	38	80.9
19	154.6	191	149	72.7	115	136	84.5	46	38	82.6
65	148.4	184	155	84.2	112	144	77.7	50	41	82
35	149	176	148	84	109	135	80.7	46	40	86.9
26	159.6	187	152	81.2	119	142	83.8	50	41	82
25	152.2	188	146	77.6	115	132	87.1	54	35	64.8
26	150.5	108	132	81.8	116	142	81.6	48	37	77
36	150	182	154	82.4	110	145	75.8	49	40	81.6
23	149	191	148	77.4	112	128	87.5	50	39	78
24	150.9	183	151	82.5	113	138	81.8	46	40	86.9
17	152.2	185	152	...	111	133	...	40	36	...

Average, Kagaba Men

150.9	183	147.6	78.9	114.3	136.8	83.7	47.2	38.4	82.2
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KAGABA WOMEN

Age	Stat. in Cm.	H.L. in Mm.	H.B. in Mm.	Ceph. Index	F.H. in Mm.	F.B. in Mm.	Face Index	N.H. in Mm.	N.B. in Mm.	Nasal Index
30	128.5	174	145	83.3	100	130	76.8	47	32	68
25	137.5	180	147	81.6	112	137	81.7	42	37	88
40	131.7	175	178	101.7	98	131	74.8	42	37	88
40	128.5	176	142	80.6	95	134	71.1	39	39	100
20	131.6	173	146	84.3	100	129	77	40	35	87.5
19	131.2	177	137	77.4	97	125	77.6	36	34	94.4
50	132	175	148	84.5	116	125	92.8	44	49	111.3
17	137.5	168	150	89.2	97	137	70.8	45	33	73.3
18	131.1	179	144	80.4	103	133	77.4	43	33	76.7
18	142	172	142	82.5	116	138	84	43	37	86
34	143.8	172	145	84.3	111	132	84	48	35	72.9

Average, Kagaba Women

131.2	174.6	147.6	84.5	104	132	78.9	42.6	35.5	86.0
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Average, Kagaba Men and Women

141.5	178.8	147.6	81.2	114.3	136.8	81.3	42.2	38.4	84.1
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GOAJIRO MEN

Age	Stat. in Cm.	H.L. in Mm.	H.B. in Mm.	Ceph. Index	F.H. in Mm.	F.B. in Mm.	Face Index	N.H. in Mm.	N.B. in Mm.	Nasal Index	
40	189	162	85.6	121	140	86.4	56	42	75
21	184	160	86.9	121	127	95.2	57	37	64.9
27	193	162	83.9	122	130	93.8	56	36.5	65.1
28	192	169	88	125	152	82.2	52	35	67.4
22	186	150	80.6	115	142	80.9	54	35	64.8
28	176	157	89.2	122	139	87.7	56	41	73.2
40	190	165	86.8	121	153	79	56	46	82.1
19	176	154	86.5	103	130	79.2	47	37	78.7
25	186	151	81.1	122	146	83.5	51	42	82.3
20	185	155	83.8	117	140	83.5	51	36	70.5
30	166	151	90.9	115	131	87.7	48	36	75
	201	152	75.6	111	120	92.5	46	35	76
25	183	160	87.4	115	150	76.6	54	47	87
28	174	151	86.7	116	138	84	55	47	85.4
45	176	152	86.3	121	137	88.3	50	41	82
50	178	145	81.4	115	132	87.1	56	40	71.4
50	155.5	186	153	82.2	122	146	83.5	56	42	75
35	163	172	149	86.6	112	141	79.4	50	37	74
34	159.8	181	162	89.5	118	154	76.6	51	41	80.3
36	162.4	183	153	83.6	121	147	82.3	48	35	72.9
50	159.1	194	165	84.5	126	157	80.2	56	47	83.9
18	154.1	182	157	86.2	116	141	82.2	48	38	79.1
25	157.3	179	151	84.3	119	139	85.6	50	39	78
23	166.1	187	155	82.8	121	147	85	51	37	72.5
31	165.2	187	162	86.6	123	151	81.4	51	39	76.4
24	158.5	185	154	85.6	125	147	85	53	40	75.4
48	162.4	186	157	84.4	117	143	81.1	49	37	75.5
24	156.2	166	154	92.5	114	139	82	47	36	76.5
36	155.6	186	150	80.6	124	144	84.7	46	38	82.6

Average, Goajiro Men

159.4	183.1	155.8	85.1	118	142.1	84	51.1	42.4	75.9
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GOAJIRA WOMEN

Age	Stat. in Cm.	H.L. in Mm.	H.B. in Mm.	Ceph. Index	F.H. in Mm.	F.B. in Mm.	Face Index	N.H. in Mm.	N.B. in Mm.	Nasal Index	
25	175	152	86.8	95	130	73	41	34	82.9
30	165	148	89.6	116	128	90.6	45	37	82.2
48	155	101	156	64.7	106	140	75.7	46	37	80.4
50	150	164	144	87.8	105	134	78.3	45	35	77.7
25	146	170	146	85.8	115	133	84.9	56	34	60.7
18	145	176	146	82.9	111	131	84.7	43	30	69.7
20	149.5	174	156	89.6	102	134	76.1	47	36	76.5
16	147.5	170	140	86.4	103	127	81.1	46	30	65.2
17	138.8	184	151	82	113	149	75.8	52	41	78.8
16	137.1	170	147	82.3	109	136	80.1	46	36	78.2
30	146	172	140	81.8	110	123	89.3	49	30	61.2
20	147	175	147	84	114	131	87	49	29	59.1
60	142.8	180	149	82.7	110	139	79.2	50	40	80
46	151.3	184	149	82.7	117	138	79.7	49	34	69.3
50	145.6	182	148	81.3	118	140	84.2	57	38	66.6
28	169.1	191	152	79.5	120	145	82.7	52	32	61.5
22	145.3	175	142	81.1	112	131	85.4	51	32	62.7
21	138.9	163	140	85.8	116	128	90.6	43	33	76.7
20	149.2	173	146	84.3	97	137	70.8	44	31	70.4
18	151.1	176	151	85.8	113	134	84	47	35	74.4
17	144.7	172	150	87.2	114	136	83.8	46	33	71.7
30	147.9	178	157	88.2	117	145	80.6	54	32	59.2

Average, Goajira Women

146.9	171.3	147.9	83.8	110.5	137.9	81.7	48	34	71.7
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Average, Goajiro Men and Women

153.1	177.2	151.8	84.4	110.5	138.5	82.8	99.1	38.2	73.5
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APPENDIX II

THE AUTHOR'S EXPEDITIONS TO AMERICAN TROPICS

<i>Year</i>	<i>Auspices</i>	<i>Place</i>
1914	Outlook Magazine	Mexico
1915	Outlook Magazine	Central America
1916	Outlook Magazine	Central America, Mexico
1922	Outlook Magazine	Central America, Mexico
1926	Peabody Museum of Harvard and American Museum of Natural History and N. Y. Times	Central America
1928	Museum of the American Indian, Heye Foundation, and Museum of Comparative Zoology of Harvard and N. Y. Herald Tribune	Central America
1930	Museum of the University of Pennsylvania, N. Y. Times	Central America
1931	Museum of the University of Pennsylvania, Museum of the American Indian, N. Y. Times	Colombia, South America
1932	Museum of the American Indian	Central America
1933	Museum of the University of Pennsylvania	Central America
1936	Museum of the American Indian and Museum of the University of Southern California	Colombia, South America

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